U.PORTO

FEP FACULDADE DE ECONOMIA
UNIVERSIDADE DO PORTO

THE IMPACT OF HUMAN RESOURCE MANAGEMENT ON EMPLOYEE'S PERFORMANCE AND LIFE SATISFACTION DURING CRISIS SITUATIONS

Gabriela Gonçalves Pereira

Dissertation
Master in Management

Supervised by
Professor Doutor Carlos José Cabral Cardoso
PhD Pedro Fontoura

2021

Acknowledgements

To my supervisor, Carlos Cardoso, and co-supervisor, Pedro Fontoura, without whom I would not be able to gather the necessary tools and knowledge to put together this study. A special mention to Professor Doutor Arnaldo Coelho from the University of Coimbra for his valuable inputs regarding the statistical tools that were essential to this project.

To my friends that gave me support and assurance during more uncertain times and to my boyfriend, who always found the right words when motivation was scarce.

To my family for supporting and believing in me, especially during the moments when I doubted myself. A special thank you to my parents that gave the opportunity to study abroad during the first part of this project and to my brothers who, above all problems, are always able to make me laugh.

Abstract

Purpose: The purpose of this study is to analyze how Human Resource Management Practices (HRM), namely Employee Engagement (ENG), Enablement (ENB) and Empowerment (EMP) can contribute to employee's Performance (PERF) and Life Satisfaction (LSF), considering the moderator role of Crisis Management (CRM). In doing so, it provides new insights that can help to better understand the importance of involving HRM systems in the companies' strategy to deal with uncertainty and face turbulent times, which is a topic that gained relevance in light of the on-going Covid-19 pandemic.

Methodology: This study uses a structured questionnaire to gather data from a cross-sectional sample of 532 companies from several industries in Portugal. Structural equation modelling is used to test the proposed hypotheses, and a multi-group analysis is conducted to analyze the role of CRM in the suggested relationships.

Findings: The findings suggest that HRM have a positive impact in ENG, ENB and EMP. Furthermore, ENB and EMP were found to consequently have a positive impact in PERF, but only ENG appeared to have a statistically significant relationship with LSF. The results lead to the conclusion that CRM moderated the suggested relationships.

Implications/Originality: This study provides empirical evidence and a better understanding of the role of HRM in companies' strategies during situations of uncertainty, considering the role of CRM as a moderating variable. The overall results provide support to the belief that sustainable HRM practices help companies be sustainable in demanding contexts, contributing to the employee's PERF and LSF.

Limitations: The research focused on companies from several industries and does not have a specific focus. Since the considered crisis is still going, this study might not have enough distancing to understand all the problem's dimensions and elements. Longitudinal investigations could improve the potential for making generalizations and establish clear causalities.

Keywords: Human Resource Management, Engagement, Enablement, Empowerment, Performance, Life Satisfaction, Crisis Management, Crisis, Covid-19.

Resumo

Objetivo: O objetivo deste estudo é analisar de que modo a Gestão de Recursos Humanos (HRM), nomeadamente *Employee Engagement* (ENG), *Enablement* (ENB) e *Empowerment* (EMP) podem contribuir para a *Performanc*e (PERF) e para a Satisfação com a Vida (LSF) dos trabalhadores, considerando o papel moderador da Gestão de Crises (CRM). Deste modo, este estudo fornece novas perspetivas que podem ajudar a compreender melhor a importância de envolver os sistemas de HRM na estratégia das empresas para lidar com a incerteza e enfrentar períodos turbulentos, um tópico que ganhou relevância com a atual pandemia Covid-19.

Metodologia: Este estudo foi baseado num questionário estruturado para recolher dados de uma amostra transversal de 532 empresas de diversos ramos de atividade em Portugal. A modelação por equações estruturais é usada para testar as hipóteses propostas, e uma análise multi-grupo é realizada para analisar o papel da CRM nas relações propostas.

Resultados: Os resultados sugerem que a HRM tem um impacto positivo nas variáveis ENG, ENB e EMP. Além disso, o ENB e o EMP apresentaram um impacto positivo na PERF, mas apenas o ENG mostrou uma relação estatisticamente significativa com a LSF. Os resultados permitem concluir que a variável CRM moderou as relações sugeridas.

Implicações/Originalidade: Este estudo fornece evidências empíricas e um melhor entendimento do papel da HRM nas estratégias das empresas durante situações de incerteza, considerando o papel da CRM como uma variável moderadora. Os resultados gerais fornecem suporte à hipótese de que as práticas sustentáveis de HRM ajudam as empresas a serem sustentáveis em contextos exigentes, contribuindo para a PERF e a LSF dos trabalhadores.

Limitações: Este estudo considerou empresas de diversos setores e não se focou especificamente numa indústria. Uma vez que a crise considerada ainda está em curso, este estudo pode não ter o distanciamento necessário para entender a dimensão real do problema. Estudos longitudinais poderiam melhorar o potencial para fazer generalizações e clarificar causalidades.

Palavras-chave: Gestão de Recursos Humanos, *Engagement, Enablement, Empowerment, Performance,* Satisfação com a Vida, Gestão de Crises, Crise, Covid-19.

Table of Contents

List of Abreviations

AMO	Abilities, Motivation, and Opportunities
AVE	Average Variance Extracted
CFA	Confirmatory Factor Analysis
CFI	Comparative Fit Index
CMIN/df	Chi Square /Degree of freedom
CMV	Common Method Variance
CR	Critical Ratio
CRL	Composite reliability
CRM	Crisis Management
EFA	Exploratory Factor Analysis
EFA	Exploratory Factor Analysis
EMP	Employee Empowerment
ENB	Employee Enablement
ENG	Employee Engagement
H	Hypothesis
HR	Human Resources
HRM	Human Resource Management
IFI	Incremental Fit-index
KMO	Kaiser-Meyer-Olkin
KSAs	Knowledge, Skills and Abilities
LSF	Life Satisfaction
p	Significance
PERF	Performance

r	Standardized Estimate
RMSEA	Root Mean Square of Error Approximation
SD	Standard Deviation
SEM	Structural Equation Model
SRHRM	Socially Responsible Human Resource Management
SRW	Standardized Regression Weights
TLI	Tucker-Lewis index
WoS	Web of Science

List of Figures

List of Tables

CHAPTER I - Introduction

In 2020, a health crisis without precedents in the past few decades spread through the world. The Covid-19 spread to every continent and almost every country had to experience states of quarantine, or even lockdown (Clair, 2021). Billions of people around the world were forced to make drastic changes to their daily lives, both professionally and personally (Venkatesh, 2020). More than a health crisis with tragic human costs, the Corona virus has had an immense economic impact in virtually all industries and sectors. Employees and managers were not prepared to deal with this cognitive and emotional load that forced them to develop skills such as resilience and innovation, as well as the capacity to adapt to this unexpected pandemic (Manuti et al., 2020). Supply chains worldwide had to face a series of new restrictions and challenges, which inevitably impacted the workflow and performance. Research on disaster and crisis management applies to a wide variety of both natural and man-made events. Hence, the literature on this subject has taken many different directions considering natural disasters, such as the 2011 earthquake and tsunami in Japan (Park et al., 2013), crises triggered by firms (Bundy et al., 2017) and health crises (Hollingsworth et al., 2011). Unstable environments with major natural, humanitarian or economic system disruptions subject organizations to a significant level of business risk, as unforeseen traumatic incidents can affect all aspects of business processes (Park et al., 2013). Although there are several studies regarding crises management (Fearn-Banks, 1996; Pearson and Clair, 1998, Dayton, 2004; Taneja et al., 2014), there is a clear research gap when the crisis in question is a pandemic, a topic recently brought to light due to the Covid-19 pandemic (Caligiuri et al., 2020; Carnevale and Hatak, 2020; Cooke et al., 2020). In social crisis and natural disasters, both employees and managers face extreme circumstances that can be harmful to their livelihood. The literature concerning organizational change and, more specifically, readiness for organizational change (Cunningham, 2002; Nizamidou and Vouzas, 2018; Lai and Wong, 2020), highlights the role of the employees' behaviors in the adaptation process. When firms are forced to change in order to survive, it is important to remember that people are a central part of the change process and can significantly facilitate the transition (many change implementation efforts fail because of misunderstandings of people-related issues).

Therefore, there is an increased need for HR professionals to play a positive role by helping to improve readiness and reduce resistance to change (Maheshwari and Vohra, 2015). The literature increasingly challenges the investigation of HR practices that can help companies ensure business continuity in crisis situations (Herbane, 2010; Nizamidou and Vouzas, 2018; Vardarlıer, 2016). However, no studies were found to examine specifically the impacts of employee engagement, enablement and empowerment both on performance and on life satisfaction, during a crisis situation. The Covid-19 outbreak forced many firms to make fast HR decisions, for example, regarding staying at work or working from home (when online work was possible), which operations and tasks could be carried out in a digital platform and what changed in terms of organizational priorities and how to communicate these changes to employees (Caligiuri, 2020). The crisis has forced most firms to adopt proper behaviors to manage this situation, while also trying to reassure employees and customers about the safety and effectiveness of the measures adopted to secure sustainable competitive advantage (Manuti et al., 2020). Under these extreme conditions, the decisions of managers have a major influence on the workers' mindset, as these directly impact employees who are struggling to deal with the disaster as well. Organizations can have an important impact in helping employees cope with the new work reality. However, the best practices related with daily endeavors have been the focus of organizational behavior studies, rather than more exceptional events of employee assistance practices in extraneous disasters (Harvey and Haines, 2005). This study aims to better understand the changes in work practices resultant from this pandemic, namely in the perspective of the Human Resources Management. Accordingly, the present study will consider the positive relationship between HRM policies and Employee Performance and Life Satisfaction and analyze this relationship in light of the Covid-19 pandemic. The aim is to understand if the organizations that would adopt HR practices based on employee engagement, enablement and empowerment will be more likely to generate positive attitudes and behaviors towards change and its demands.

This document opens with a literature review of the main concepts approached in the conceptual model. Afterward, Chapter 3 describes the methodology used in the study, and the following chapter will present the main results. Finally, Chapter 5 presents the conclusions, management recommendations and future research contributions, and limitations.

CHAPTER II - Literature Review and Hypotheses Development

2.1 Systematic Review and Bibliometric Analysis

To help identify the literature gap and before proceeding with the classic literature review presented in the following section, a systematic bibliometric analysis was done in order to get a better picture of the state-of-the-art in this topic. A systematic review is a replicable overview of research on a certain topic which allows the identification, selection and synthesis of all high-quality research evidence pertinent to the considered topic. Furthermore, applying bibliometric methods has become a more common practice once it is easier to use compared to, for example, content analysis; facilitates the in-depth analysis of the relationships between publications, citations, and key words; and provides the means to analyze the information in an illustrative way which facilitates its interpretation (Fontoura and Coelho, 2020). Thus, an article is being drafted for a journal submission (see Annex 3) to better guide the research and develop the theoretical background presented in the following chapter. Therefore, considering the usefulness of the bibliometric tools as a key resource to document knowledge and propose future paths for investigation (Du and Ke, 2017; Fontoura and Coelho, 2020), the article addresses the emerging need to analyze what HR practices can help to increase the organizations' response to crisis situations. The main objective of the study was to do a bibliometric study to understand the importance and direction of the literature available and identify the gaps regarding the role of Human Resource practices in dealing with crisis in the organizational context, and identify research opportunities in this area. A small body of literature was found to relate the topic of HRM and CRM, especially considering the Covid-19 pandemic. However, the bibliometric analysis suggests that the implementation of HRM practices is intrinsically related to the way in which companies manage crisis and maintain business continuity. The literature seems to suggest that companies with more integrative HRM practices and that recognize their importance when facing uncertainty were more capable to manage crises in the past and work towards a faster recovery.

2.2 Theoretical background

2.2.1 Human Resource Management Practices

Human resource management (HRM) is a core feature of an organization, which requires special expertise, and is concerned with the present issues in the company while also adopting a long-term perspective, continuously improving and changing longstanding processes to produce results (Schuler, 2000). The firm-level impact of HRM practices became a popular focus for researchers, with literature focused on the effects on performance of specific HRM practices, such as training and information sharing (Delaney and Huselid, 1996). The interest in the notion of "best practices" in HRM increased considerably around the 2000's (Marchington and Grugulis, 2000; Gould-Williams, 2003). In the 1990s, the research literature was highly focused on whether HRM practices influence the organization's performance and the employee behaviors that influence the achievement of a firm's goals (Jiang *et al.*, 2012). A significant number of studies proposed that high quality HRM can be a source of competitive advantage for companies, which the competitors cannot easily imitate (Patterson *et al.*, 1997; Schuler and Jackson, 1987). Several studies focused on analyzing the links between HRM and business performance, namely, the research of Patterson *et al.* (1997), providing evidence of the importance of HRM as a driver of, and contributor to, improved performance. This perspective has been supported by more recent literature, considering for example, the positive organizational behavior (POB) perspective, which presents the subjective context that allows individuals to feel good at work, to have a better performance, and ultimately to contribute to the firm's competitive advantage (Cameron and Spreitzer, 2012).

Around 1990, there was also a growing interest on the notion of complementary "bundles" of HR practices. The impact on the company´s profits is more pronounced when these "bundles" are used together, regardless of the organization or industry (Marchington and Grugulis, 2000). Many writers have argued that it makes sense to assess systems of HRM practices rather than focus on individual practices. According to Huselid (1995), a more effective system of HRM practices can be a source of sustained competitive advantage, once it not only exploits the potential for complementarities and synergies among such practices, but also helps to implement the company's competitive strategy. Hence, the logic behind the systems of HRM

is that the performance of an organization will improve when practices support each other and jointly reinforce employers' contributions to the organization's performance (Patterson *et al.*, 1997). Accordingly, employee performance appears as an outcome directly linked to the degree of internal fit among HR practices that operate to influence employee abilities, motivation, and opportunities (AMO framework) (Jiang *et al.*, 2012). In a similar perspective, Han *et al.* (2019) argued that the effectiveness of a HR system in supporting the strategic goals of a company depends on the degree to which it supports the employee's contributions required to achieve the organization's strategic goals. According to these authors, the effectiveness of a HR system in supporting organizational performance is related to : 1) the degree to which the system comprises HR practices supportive of the employee behaviors aligned with a firms' strategic goals; and, 2) the degree to which the system supports desired employee behaviors with complementary and mutually supportive HR practices that work towards the same goal. Furthermore, Katou (2017) studied how HRM influences organizational performance through an integrative approach-based analysis and aimed to assess the impact of HRM systems on short-term organizational outcomes, such as motivation, job satisfaction and organizational commitment, and on long-term organizational outcomes, such as employee engagement, organizational citizenship behavior, employee cooperation, employee turnover and operational performance. Katou (2017) also found that HRM systems are sequentially related to organizational outcomes and considerably impact job satisfaction and motivation, as well as employee cooperation and operational performance.

Employee performance can be seen as a function of the three components of the AMO framework, once the HR systems function by influencing the employees' abilities to perform, their motivation to perform and the opportunities to perform (Jiang *et al.*, 2012). Similarly, Lepak *et al.* (2006), present a framework of the three primary HR policy domains to which the HR policies may be oriented to, in order to maximize employee contributions: (1) Knowledge, Skills, and Abilities; (2) Motivation and Effort; and (3) Opportunities to contribute (p. 238). Ultimately, HR systems aim to immediately and directly attain a desired employee performance, which theoretically has a direct impact on organizational performance (Jiang *et al.*, 2012). With the literature increasingly challenging the research of HR systems that can help companies ensure business continuity in crisis situations (Herbane, 2010; Nizamidou and Vouzas, 2018; Vardarlıer,

2016), it has become clearer that companies need to have sustainable HR management practices to guarantee their sustainability in demanding contexts, which are becoming more frequent. Previous studies support that natural hazards (e.g. Park *et al.*, 2013) and economic crises (e.g. Gunnigle *et al.*, 2013), among other situations of uncertainty, have less negative impact on the livelihood of organizations if employees are intrinsically involved in the process of dealing with crises. It is expected that more supported, trained, recognized and motivated employees, who feel that organizations invest in them, might be more creative, resilient (Katou, 2017), autonomous and adaptable to demanding contexts and situations of instability (Cooke *et al.*, 2020), ensuring that companies are able to endure and overcome crises, while competitors might experience difficulties (Sheaffer and Mano-Negrin, 2003).

2.2.1.1 HRM and Enablement

An organization can face several external disruptive events, for example, fluctuating economic trends or, in this case, pandemics. The changes derived from these occurrences can cause employees to be ineffective, regardless of their engagement, and for employees to be able to overcome obstacles effectively, they need to be optimally enabled. An enabling work environment can be characterized as one that provides the tools and processes needed to deal with employee obstructions, improving person-job fit (Colenbaugh and Reigel, 2010). Accordingly, employee enablement is defined by Permana et al. (2015) as "the extent to which employees feel they are provided with what they need to do their jobs well and are provided with an environment in which they feel comfortable to perform to the best they can be" (p.580). Internal communication strategies related with employee enablement rely on integration with other managerial levers, mutual commitment and new languages. To effectively enable employees, these strategies should be integrated with other practices present in the company, once enablement is an internal communication topic relying on human resources management, oriented to developing positive relationships in a process of continuous conversations grounded on synergies with managers (Mazzei, 2014). Managers have an important role assuring the implementation of enabling practices, such as the existence of an infrastructure to share data, thus helping employees understand the context of their work and carrying out operational actions. The HR department is critical in ensuring that the company provides well-functioning

equipment, the necessary supplies, effective work processes, and clear direction from supervisors (Permana et al., 2015). Hence, HRM practices, such as providing essential tools, financial resources, a collaborative work environment and clear policies and procedures, play an important role in this process through the communication of strategies, making sure that all the relevant information is transmitted throughout the company and influencing attitudes and behaviors of employees.

Thus, the first hypothesis is formulated as follows:

H1: HRM has a positive impact on Enablement in a crisis context

2.2.1.2 HRM and Engagement

The concept of employee engagement has been gaining considerable importance over the last decades, as it impacts employee performance and their well-being at the workplace. Workplace wellbeing is a holistic measure that enhances employee engagement and, according to the Towers Perrin Talent Report (2003), the interest of senior managers in employee wellbeing is the main driver of employee engagement. Employee engagement is regarded as a source of competitive advantage as organizations try to survive and deal with stiff competition (Bedarkar and Pandita, 2014). An employee is engaged when he makes a full cognitive, physical and emotional connection with his work roles (Kahn, 1990). Thus, employee engagement can be defined as the intensity of the employees' emotional connection with the company, which influences employees to apply greater discretionary effort to achieve the work objectives. This behavioral construct (Mazzei et al., 2019) has two components - the affective attachment to the company and the discretionary effort/willingness to go beyond the formal job (Permana et al., 2015). When considering a broad conceptualization, an engaged employee refers to a personal disposition towards enthusiasm and an untiring psychological state of cognitive absorption, emotional dedication and vigor in the workplace (Mazzei, 2018). According to Fleck and Inceoglu (2010), HRM practices such job-fit, organization-fit and the alignment between the employees' view of the company's direction and the direction actually being taken lead to high levels of organizational engagement. Furthermore, Nicholson (2009) reported that practices such as opportunities for growth and development, tasks that result in a feeling of personal

accomplishment, and confidence and trust in leadership help maintaining employees engaged. Therefore, organizations should implement practices that contribute to create engaging workplaces, with a developmental HRM approach, which goes beyond the mere accommodative management of human resources and focuses on valuing people (Anitha, 2014; Mazzei et al., 2019). A positive management of change depends on the relationship between employees' perception of HRM practices and their coping behaviors, as it is through employees' attitudes that organizations are able to realize a proposed transformation and successfully maintaining it over time (Manuti et al., 2020). For example, Cunningham (2002) argues that employees that have the ability to cope with change present higher readiness for change scores, which results in a more active participation in redesign activities and awareness of the personal contribution to the whole process. Therefore, when an employee feels the organization's support during change processes, he/she will tend to maintain a positive relationship with it and to adopt coping behaviors with change (Manuti et al., 2020). Hence, the literature points to the conclusion that HR practices can enhance employee engagement, which then leads to improved employee performance (Harter et al., 2003).

Thus, the second hypothesis is formulated as follows:

H2: HRM has a positive impact on Engagement in a crisis context

2.2.1.3 HRM and Empowerment

According to Conger and Kanungo (1998), empowerment can be defined as the motivational concept of self-efficacy. For Spreitzer (1995), empowerment referred to the degree to which an employee is capable of influencing strategic administrative or operating outcomes at work. For employees to be able to execute actions for better results, they need to have the authority to make decisions. According to Howard and Foster (1999), HR empowerment systems help reducing the employees' concerns with employment situations, which can otherwise decrease the job satisfaction, motivation and commitment. Through feedback and recognition programs, the HR systems can identify the task objectives most valued by the company. Empowerment can also be seen as a transfer of responsibility and power to employees in a way they actively contribute to the success of the organization, considering that it depends

8

on the congruency of the employees' desires with the company's vision and goals (Brown and Harvery, 2006). Accordingly, this concept comprehends a set of progressive HRM practices that assign substantial decision-making rights and power to employees, in addition to providing them a high degree of autonomy and control regarding the execution of their tasks (Yin et al., 2019). Furthermore, Seibert et al. (2004) perceive empowerment as a system of articulated bundles of progressive HRM practices, such as information sharing, working together to improve the employee's involvement in the decision-making process. That is, by providing access to information, such as productivity or financial performance, empowerment is a tool to help employees to be more autonomous, participate in the decision-making process, and contribute to organizational performance, and thus feeling more empowered. Moreover, some broad HRM systems, such as High-Performance Work Practices (Huselid, 1995), view empowerment practices as a key element, and thus comprise a wide range of practices that might transfer the decision-making power to employees, such as information sharing, autonomy and team accountability. Hence, the literature on this topic points to the conclusion that HRM practices, such as transformational leadership, intellectual stimulation of creativity and innovation, provide a supportive atmosphere to overcome personal challenges, inspiring employees by encouraging excellent performance, and having leader's role modeling in the workplace are important drivers to empower employees (Permana et a. 2015).

Thus, the third hypothesis is formulated as follows:

H3: HRM has a positive impact on Empowerment in a crisis context

2.2.2. Employee Performance

In the 1990s, the literature was highly focused on whether HRM practices influence the organization's performance and, more specifically, employee performance (Jiang et al., 2012). A significant number of studies provided evidence that high quality HRM can be a source of competitive advantage for companies that the competitors cannot easily imitate (Patterson et al., 1997; Schuler and Jackson, 1987). An increasing body of literature argues that the use of High-Performance Work Practices, such as comprehensive employee recruitment, incentive compensation and extensive employee involvement and training, promote the knowledge and

abilities of current and potential employees, increase their motivation and enhance the retention of quality employees (Huselid, 1995). Furthermore, a number of studies provide evidence that supportive HRM systems can result in increased employee motivation and engagement, which in turn can have a significant impact on productivity and performance (Manuti et al., 2020; Wrightet et al., 2003; Wrightet et al., 2005).

2.2.2.1 Enablement and Employee Performance

Empirical studies show that there is a correlation between the company's performance and its propensity to provide the workers with the resources needed to do their jobs well, which can be seen in the way that an organization designs jobs (Fleck and Inceoglu, 2010). It is important to match the right people with the right skills for the right job, that is, the company should be concerned with enabling people who are both ready and able to do their jobs, as studies revealed that highly engaged and enabled employees are 50% more likely to outperform expectations, with companies in the top quartile on both engagement and enablement achieving revenue growth 4.5 times greater than companies focused only on engagement (Permana *et al.,* 2015). Furthermore, Conger and Kanungo (1988), reported that employees' performance correlates with their problem solving and decision-making capabilities, suggesting that employees must be engaged, enabled, and empowered to achieve excellence. The literature suggests that the role of enablement on organizational performance is increasing, showing a positive relationship between the employees' degree of enablement and self-reported financial performance (Wright, 2005), displaying a correlation between the company's performance and the degree to which it is focused on providing people the necessary tools to do their jobs well. The matching process is a rational predictor of performance once employees that perceive a high-level match between their job and their skills have more positive work outcomes (Bhat, 2014), with results from Caldwell and O'Reilly (1990) indicating a positive relationship between enablement expressed in person-job fit and performance. Additionally, several studies reach the conclusion that a proper match between personal strengths and job content has positive work outcomes, more specifically, it is positively related to job satisfaction, organizational commitment, (Cable and DeRue, 2002), job attitudes (Saks and Ashforth, 2002), and job satisfaction (Hecht and Allen, 2005). According to Kristof-Brown and Johnson (2005), the

person-job fit provided by enablement demonstrates a stronger correlation with performance than person-organization fit.

Thus, the fourth hypothesis is formulated as follows:

H4: Enablement has a positive impact on Employee Performance in a crisis context

2.2.2.2 Engagement and Employee Performance

Rich et al. (2010) conceptualized a behavioral approach to job performance, defining it as the accumulated value provided by employee's behaviors that directly or indirectly contribute to achieve the company's objectives. The authors argue that engagement relates to human agency, therefore job performance should consider only the actions directly related to accomplishing core activities, defining it as task performance. Accordingly, their study found evidence that the path from job engagement to task performance was positive and statistically significant, that is, employees with high levels of engagement also reported higher levels of task performance. When employees show an affective and normative commitment towards the organization, they are more likely to feel more comfortable working there and to develop a sense of pride and loyalty, which can result in positive work behaviors (Polo-Vargas et al., 2017). They will also present more productive behaviors that increase the synergies between the team efforts to achieve the company's goals, which then results in superior employee performance (Nazir and Islam, 2017). Also, once engaged employees are more focused on their work than non-engaged ones, some authors argue that engagement impacts significantly job performance (Schaufeli and Bakker, 2004; Saks, 2006; Rich et al., 2010). Researchers such as Ashforth and Humphrey (1995), suggest that a highly engaged employee feels cognitively and emotionally connected to his/her efforts and goes beyond the pursuit of the role-related objectives, working cooperatively with colleagues, taking responsibility for their tasks, and contributing to the company's goals. Furthermore, according to Mazzei et al. (2019), an engaged employee shows a strategic focus on organizational purposes, leading to a better in-role and extra-role performance.

Thus, the fifth hypothesis is formulated as follows:

H5: Engagement has a positive impact on Employee Performance in a crisis context

2.2.2.3 Empowerment and Employee Performance

The sense of having autonomy can be an important motivator for employees, leading posteriorly to better performance. It is crucial that companies assure that engaged and enabled employees also have the proper level of autonomy to make decisions. Therefore, empowerment relates to the degree to which employees are informed and involved in the process of decision making that affects both their work and the companies' (Permana, 2021). When these conditions are present, empowerment can improve employees' sense of competence and confidence in their ability to accomplish the tasks delegated to them (Permana et al., 2015). In that sense, several theoretical approaches analyzed empowerment practices in an effort to understand the benefits and value brought by them, assuming that these practices enhance organizational performance through psychological, strategic and institutional advantages, regardless of the company's features (Wood et al., 2015). Even though a situation of severe uncertainty can create a context in which these conditions are hard to meet, employees empowered with the skills, attitudes and opportunities necessary to cope with uncertainty will be more capable to deal with organizational change (Cunningham, 2002). According to Areiqat and Zamil (2011), empowerment can be a useful tool for crisis early warning, as well as for the management of the actual crisis, once it helps to direct the focus of employees towards creative thinking and to enable them to act properly in critical circumstances. This led to the conclusion that when the empowerment process is a priority to the company, employees have autonomy to make decisions and assume the results of those decisions, leading to performance. Empowerment qualifies them to expect and confront problems and difficulties through the knowledge and experience gained, enabling them to prepare an emergency plan before the crisis and allowing to come out of the crisis with minimal losses and damage. (Areiqat and Zamil, 2011).

Thus, the sixth hypothesis is formulated as follows:

H6: Empowerment has a positive impact on Employee Performance in a crisis context

2.2.3 Life Satisfaction

Employee happiness or well-being is an evolving topic in management. Nowadays, companies require employees not simply to carry out their tasks, but also expect them to handle stressful situations while remaining committed and performing well (Polo-Vargas et al., 2017). With that purpose, it is necessary that organizations provide the conditions that allow employees to keep high levels of well-being in terms quality of life, once happy people tend to be more open-minded, creative and productive (Liubomirsky et al., 2005), contributing to positive outcomes for firms. Diener *et al.* (1985) characterized life satisfaction as a person's evaluation of the global quality and satisfaction with life. The more recent literature that took into consideration the organizational settings has related this concept with the quality of the work-life (Jones, 2006; Rode, 2004). Having a work-life balance can substantially increase individual life satisfaction as when an individual is dissatisfied with his work or suffers from burnout, is more likely to have lower life satisfaction (Wolfe and Patel, 2018). High levels of life satisfaction are related to good performances and greater proactivity, even more than high levels of job satisfaction, while low life satisfaction is associated with the intention to retire at an early age (Polo-Vargas et al., 2017).

2.2.3.1 Enablement and Life Satisfaction

Associated with the concept of happiness, well-being is an important indicator of the organization' positive influence on employees (Anitha, 2014). By using structural equation modeling, the results from Judge and Hulin (1993) support a reciprocally causal relationship between job satisfaction and well-being and concluded that when people have a satisfying and motivating job, they will present higher levels of well-being. The wealth and happiness of people is intrinsically related to the efficient allocation of labor. Once enablement is related with matching the right people with the right skills for the right job (Permana et al., 2015), efforts were made to relate this matching process with satisfaction with life. Consequently, Luechinger et al. (2006) argue that a situation in which employees perceive an optimal match between job characteristics and their preferences not only assures the most productive use of valued skills, but it also creates individual utility gains, which leads to gains in terms of satisfaction with life.

For Fisher (2010), the assessment of human strengths and the evaluation of an optimal match between personal strengths and job content can be a happiness-enhancing intervention. According to Searle and Parker (2013), work design can influence happiness and related positive outcomes in a "top-down" way, through latent work characteristics and in a "bottom-up" way, that is, through activities that give employees the opportunity to customize their jobs by actively changing their tasks and interactions with others at work.

Thus, the seventh hypothesis is formulated as follows:

H7: Enablement has a positive impact on Life Satisfaction in a crisis context

2.2.3.2 Engagement and Life Satisfaction

A condition that has been related with life satisfaction is organizational commitment (Lambert et al., 2013), which is defined by Meyer and Allen (1997) as the psychologic bond between the employee and the company that influences the decision of staying or leaving a job. Employees who experience high levels of work engagement and satisfaction with their careers are happy in their lives (Joo and Lee, 2017). Engagement plays an important role here as it reveals an employee's ability to be passionate about the work and recognize it as a fulfillment source (Polo-Vargas et al., 2017). A study from Joo and Lee (2017) found that when employees have higher levels of organizational support and psychological capital, they will present high levels of work engagement, satisfaction with their careers and perceive a greater sense of well-being in their lives. A study carried out by Polo-Vargas et al. (2017) concluded that the behavioral dimension of engagement is the one that most contributes to life satisfaction when compared with the cognitive and affective dimensions, which gives an important indication of what type of HR practices companies should focus on when aiming to increase the employees' life satisfaction. Engagement can be related to well-being in several ways. Not only does it have a positive impact on the physical health (Bakker et al., 2008) but it also leads to higher levels of life satisfaction (Ferreira et al., 2020) and to an overall quality of life (Mache et al., 2014). Engaged employees can be a key resource during crisis. According to Sorenson (2013), the differences in performance between engaged and actively disengaged employees result in significant differences in the probability of success. Addressing performance differences is always an

important topic for companies, but it is particularly critical during a recession as firms with average engagement levels had no advantage over their competitors in recovering from the economic recession. Hence, there is evidence in the literature of a link between high employee engagement and a company's performance when resolving crisis situations, as the role of internal communications is crucial and conditions the firm's ability to properly manage a crisis (Akhmetshin et al., 2019). Therefore, the literature presents engagement as a facilitator of the relationship between organizational commitment and life satisfaction.

Thus, the eighth hypothesis is formulated as follows:

H8: Engagement has a positive impact on Life Satisfaction in a crisis context

2.2.3.3 Empowerment and Life Satisfaction

The relationship between entrepreneurship and life satisfaction is a crucial component of the individual well-being (Pavot et al., 1991) and has become a topic of increasing interest for researchers (Wolfe and Patel, 2018). Employee empowerment does not only contribute to the work's quality but also impacts the satisfaction of the employees (Sergio and Rylova, 2018) and happy people tend to be more creative and more productive, leading to positive outcomes for the organizations (Polo-Vargas et al., 2017). Well-being has been reported to positively impact physical health and life satisfaction among individuals (Pradhan et al., 2017), enhancing employee performance and reducing absenteeism and turnover (Spector, 1997). Wright (2010) considered the concept of employee happiness as psychological well-being and studied its role on important workplace outcomes, such as job performance and employee retention. Strategies that train employees to proactively self-monitor or manage their personal perceptions to enhance positive and discourage negative displays of emotion can contribute to the psychological well-being of employees, which in turn can enhance employee empowerment (Wright and Cropanzano, 2007). Thus, when employees can optimize the balance between themselves, their jobs and the workplace, and shape the job components to meet their own preferences, positive employee outcomes, such as job satisfaction, positive affectivity, affective commitment, productivity and subjective happiness, will emerge (Li, 2015). Considering the body of literature regarding the role

of employee empowerment in life satisfaction, this investigation proposes the empirical testing of this impact, in a crisis situation.

Thus, the ninth hypothesis can be written as the following:

H9: Empowerment has a positive impact on Life Satisfaction in a crisis context

2.2.4 Crisis management: the moderation effect

The World Health Organization (WHO) released the first situation report about the Novel Coronavirus (2019-nCoV) on January 21st, 2020. On January 31st, the Emergency Committee on 2019-nCoV, under the International Health Regulations, declared that this outbreak was a public health emergency of international concern. This meant that the Coronavirus constituted a public health risk to other States through the international spread of the disease and it required a coordinated international response (IHR 2005). At this point, 9826 cases were confirmed worldwide, with Europe accounting for 14 (WHO 2020a). Despite the nature of this most recent crisis, organizations can be affected by several types of disasters and, in the last decades, numerous researchers tried to define "crisis". According to Fearn-Banks (1996), a crisis is "a major occurrence with a potentially negative outcome affecting an organization, company, or industry, as well as its publics, products, services, or good name" (p.6). An event like this can disrupt regular business operations and pose a threat to the company's survival. Furthermore, a crisis can be a product failure, strike, a terrorist attack, a natural disaster or, in the most recent case, a worldwide pandemic. For Hamblin (1958) a crisis as "an urgent situation in which all group members face a common threat" (p. 322). Moreover, Dayton (2004) stated that the "modern crisis does not recognize or respect national boarders; it thrives on fragmentation and variety…it does not confine itself to a particular policy area; it jumps from one field to another, unearthing issues and recombining them into unforeseen mega threat, the modern crisis is not boxed in by set dates that mark a clear beginning and ending; it is an embedded vulnerability that emerges, fades, mutates, and strikes again" (p. 166). This definition is particularly relevant as it highlights the extremely unpredictable character of a crisis and its wide range impact. The Covid-19 is a clear example of a crises like this, with an unforeseen succession of shock waves that spread to almost every sector in every country. Considering all

the definitions cited above, it becomes clear why the role of managers is so challenging in such a situation. "Crisis Management" (CRM) is a process of strategic planning for a crisis, which attempts to remove some of the risk and uncertainty from the negative occurrence and, therefore, can allow the organization to have more control over the situation (Fearn-Banks, 1996). CRM can help diminishing the financial distress caused by an unexpected event and its purpose is to inform stakeholders of potential threats and how to control a crisis (Alariki and Al-Abed, 2021). Pearson and Clair (1998) define CRM concept as a "systematic attempt by organizational members with external stakeholders to avert crises or to effectively manage those that do occur" (pp.60-61). According to these authors, the criteria to access the effectiveness of these type of efforts should be based on analyzing if the operations were able to be sustained or resumed. This means that crisis management efforts were effective when the company "is able to maintain or regain the momentum of core activities necessary for transforming input to output at levels that satisfy the needs of key customer, organizational and external stakeholders' losses are minimized, and learning occurs so that lessons are transferred to future incidents." (Pearson and Clair, 1998, pp.60-61). According to Dayton (2004), crisis management includes the set of management practices concerning non-routine occurrences, but it also comprises the areas of prevention/preparation, and the complex process of recovery and adjustment that follows the crisis response. Organizations have to take into consideration some core problems to proceed with the strategic management of crises: preparation, fast decision-making capabilities and the integration of crises management and prevention on the company's strategy (Fearn-Banks, 1996). The integration of crises management in the strategic management of an organization is essential to help managers making informed and thorough decisions when they are subjected to high levels of stress and uncertainty. The adoption of specific crisis management practices depends on which stage the organization is on, that is, pre, during or post crisis. The pre-crisis stage precedes the event and so, research is focused in developing a state of readiness, while the research in the post-crisis stage critically examines and learns from what happened to facilitate the management of future incidents (Lai and Wong, 2020). In the during-crisis stage, the research aims to develop emergency and contingency management (Sawalha et al., 2013). However, most of the studies were conducted after the crisis, as opposed to the present study that takes place during the Covid-19 crisis. The process of preparing a crisis can go from analyzing if the company possesses the required means to deal with an unpredictable event, to

defining a crisis action plan involving the expertise of a crisis manager to oversee the situation and bringing a sense of normality to the company (Taneja et al., 2014).

Since the beginning of the Covid-19 crisis, companies were forced to implement unexpected measures, such as layoff, reducing working hours and usage of remote working tools, which inevitably have a significant impact on employees' attitudes and behaviors and can affect their perception of role ambiguity and job security (Manuti et al., 2020). Therefore, CRM will be the moderating variable in the model proposed in this study as it might change the strength or direction of the effects between the variables HRM, Employee performance and Life Satisfaction. This will help understanding if the differences on employee performance during the Covid-19 crisis were related to a better or worst HR management, and the role that the company's capability of managing the crisis had in this process.

CHAPTER III - Methodology

3.1 The conceptual model and research objectives

Studying the impact of HR practices on performance can easily lead to inconclusive and statistically irrelevant results, as such a relationship is not direct, and performance also depends on many other factors. To overcome this problem, the model used in this study will rely on the use of mediator variables that contribute to performance and are closely related to it. The model showed in Figure 1 represents the set of hypotheses to be tested in this study. The purpose of this investigation is to contribute to the analysis of Crisis Management and its relationship with HRM practices, Employee Performance and Life Satisfaction.

The model adopted in this paper was inspired in the models used in previous studies regarding the relationship of HRM with employee performance and strategic decision making (Jiang et al., 2012; Lepak et al., 2006). In their work, Jiang et al. (2012) included two models, the first examining the relationships among HR practices within human resource systems (p. 76) and the second, portraying the measurement model of HR systems (p. 82). In order to identify the HR systems' components, these authors drew upon the AMO framework and the discussions in the literature on the levels of HR systems, providing a graphic depiction of the results and considering the three primary policy domains as well, ultimately making a connection with employee performance. Similarly, Lepak et al. (2006) present one integrated model linking the HR System, HR System Mechanisms, and Organizational Performance, also relating the AMO with employee performance (p.231), and a second model presenting the configuration of HR systems, which are comprised of three distinct HR policy domains oriented toward: 1) influencing employee knowledge, skills and abilities (KSAs), 2) employee motivation, and 3) opportunities for employees to contribute to knowledge creation (p.238). Following a similar logic, the model developed in this study seeks to reflect three main dimensions of HR management: 1) enablement (that is, providing the tools and processes needed for employees to deal with obstructions, thus influencing the KSAs); engagement (that is, the intensity of the employees' emotional connection towards the company, thus influencing the motivation); and empowerment (that is, the degree to which employees are informed and involved in the process of decision making that affects both their work and the companies', thus influencing the

opportunities to contribute). Ultimately, the model seeks to analyze their relationship to employee performance and life satisfaction considering the moderating role of crisis management.
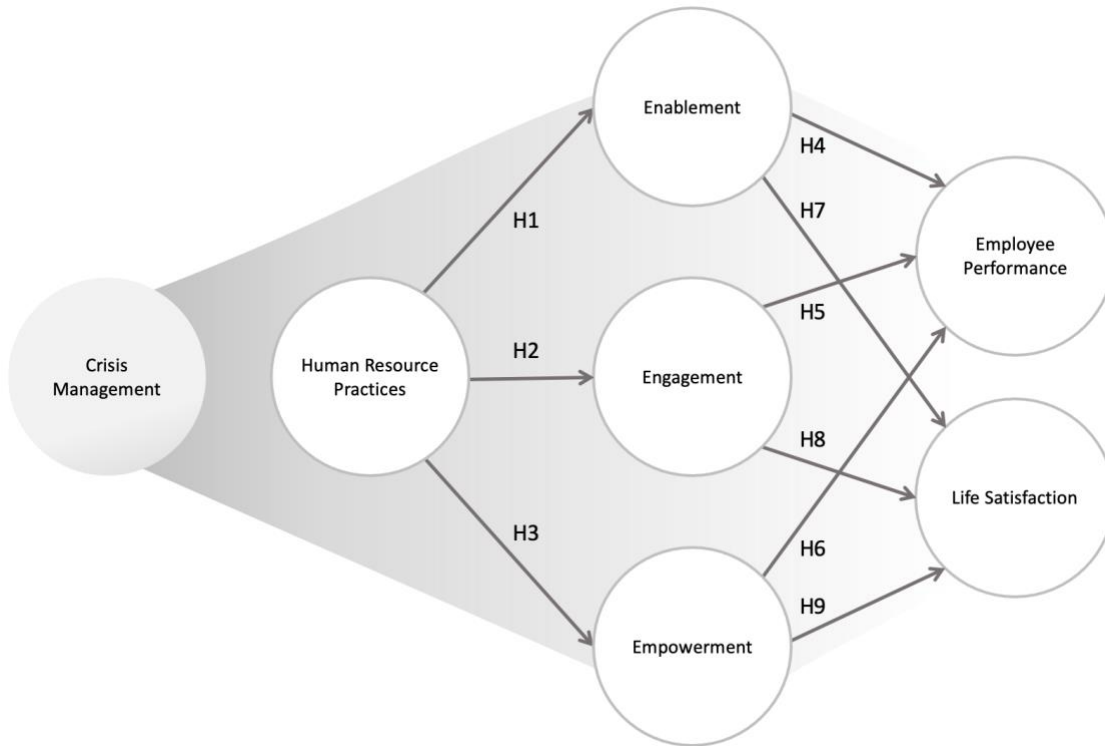
Figure 1- Conceptual Model

The hypotheses in the model are the following:

H1: Human Resource Practices have a positive impact on Enablement in a crisis context.

H2: Human Resource Practices have a positive impact on Engagement in a crisis context.

H3: Human Resource Practices have a positive impact on Empowerment in a crisis context.

H4: Enablement has a positive impact on Employee Performance in a crisis context.

H5: Engagement has a positive impact on Employee Performance in a crisis context.

H6: Empowerment has a positive impact on Employee Performance in a crisis context.

H7: Enablement has a positive impact on Life Satisfaction in a crisis context.

H8: Engagement has a positive impact on Life Satisfaction in a crisis context.

H9: Empowerment has a positive impact on Life Satisfaction in a crisis context.

3.2 Sample and data collection

The primary research instrument is a structured questionnaire developed though the Google Forms online platform. The questionnaire was made available to a sample of 2500 organizations operating in Portugal, and targeted to a single employee per organization, who responded according to their perceptions of the company's practices regarding those issues. This was the chosen method as it allows to gather the data necessary to test the hypotheses raised in the limited time available and is based in a current and significant sample of the population relevant to this study. The questionnaire included a small introduction detailing the purpose of the study, as well as the author's contacts in case any clarifications were needed. The questionnaire included several questions to characterize the sample, such as the respondent age and occupation, as well as his/her seniority in the firm and the firm's size and the industry sector. To select the organizations, the Portuguese Institute of Accreditation annual list was used, as it contains certified organizations that operate in Portugal and comprises several different sectors of activity. The respective organization's email contact was obtained through the institutional website and the questionnaire was sent between April and May of 2021. From the 2500 organizations contacted, 353 responded to the survey and all responses were valid. Table 1 characterizes demographically the sample.

Organization characteristics	Frequency	Percentage (%)
Location		
North	114	32.3
Center	95	26.9
Lisbon	71	20.1
Porto	51	14.4
Other	22	8.7

Organization characteristics	Frequency	Percentage (%)
Staff		
1 to 9 employees	43	12.2
10 to 49 employees	121	34.3
50 to 100 employees	75	21.2
101 to 249 employees	49	13.9
250 or more employees	65	18.4
Activity sector		
Services	104	29.5
Metallurgical industry	42	11.9
Public works and Civil construction	31	8.8
Energy	28	7.9
Others	148	41.8
Academic degree		
High School	58	16.4
Bachelor degree	206	58.4
Master's degree	83	23.5
PhD	3	0.8
Other	3	0.8
Time at the organization		
Up to 1 year	27	7.6
More than 1 year up to 3 years	58	16.4
Over 3 years up to 5 years	41	11.6
Over 5 years up to 10 years	62	17.6
More than 10 years	165	46.7
Position		
Management	71	20.1
Director	59	16.7
Human Resource Department	51	14.4
Administrative	38	10.8
Other	134	37.9

Table 1– Demographical sample characterization

3.3 Measurements

The items of the questionnaire were based on an extensive literature review and here assembled from already published scales to give reliability to the results. A 7-point Likert style response scale was utilized, ranging from 1- strongly disagree to 7 - strongly agree. To maintain the credibility of the original scales but still allow the non-English speakers respondents to understand the questions, a Portuguese version of the scales was search in the Portuguese literature. From the seven scales used in this paper, four were found to already have a Portuguese translation that was used in the present study. The remaining three scales were translated using the method of retro-translation to maintain its validity as much as possible, and all the scales were tested with a small sample of respondents to obtain feedback before the final release.

Enablement was measured using the recently developed scale from Permana (2021). The scale used to measure the Human Resource practices from Chen and Huang (2009) was the most cited scale found in the literature to measure this construct. The Utrecht Work Engagement Scale (UWES; Schaufeli and Bakker, 2003) is the most popular measure of work engagement and its psychometric properties have received considerable support since the scale's development (Mills *et al.*, 2012). The employee performance scale from Mott (1972) is a highly cited performance scale. Finally, the Satisfaction With Life Scale (Diener *et al.*, 1985) has been highly used since its introduction in 1985, as a measure of the life satisfaction component of subjective well-being; it has demonstrated good psychometric characteristics (Pavot and Diener, 1993) and since its introduction has been used in hundreds of studies to assess life satisfaction.

Table 2 presents in detail the items of the scales measuring the main variables of the conceptual model, that is, Human Resource Practices, Employee Enablement, Employee Engagement, Employee Empowerment, Employee Performance and Life Satisfaction. The factor SRW represents the percentage variation in the dependent variable that is explained by the variation of the independent variables, which in the AMOS software is represented by the standardized regression weights (SRW). This coefficient should present a value above 0.25 and the bigger the value the better the reliability indicator. In this study, all the values obtained for the SRW were significantly above 0.25, which shows a good reliability indicator for each one of the items.

Construct	Item	SRW
Human Resource practices – HRP (Chen and Huang, 2009)	1) There is availability of formal training activities in the company	0.902
	2) There is availability of comprehensive training policies and programs in the company	0.903
	3) There is availability of training for new hires in the company	0.904
	4) There is availability of training for problem-solving abilities in the company	0.889
	5) To which degree there is profit sharing in the company?	0.688
	6) To which degree there is incentive pay in the company?	0.722
	7) To which degree there is a link between performance and reward?	0.923
	8) The company has a developmental focus?	0.926
	9) The company has a results-based appraisal?	0.854
	10) The company has a behavior-based appraisal?	0.886
	11) The company has a focus in selectivity in hiring	0.861
	12) The company has a focus in selection for expertise and skills	0.895
	13) The company has a focus on selection for future potential	0.916
	14) Employees were allowed to make decisions	0.778
	15) Employees were allowed to suggest improvements into work	0.913
	16) Employees' voices were valued by the organization	0.932

Construct	Item	SRW
Employee Enablement - ENB (Iman Permana, 2021)	1) People in my work area are collaborative	0.928
	2) The working environment in my area motivates me to perform well	0.957
	3) The work processes are clearly defined	0.902
	4) The work processes helped me get my job done effectively	0.950
	5) My company provides me with the means for learning knowledge	0.954
	6) My company provides me with the means for sharing knowledge with others	0.944
	7) I have well-functioning equipment to perform my work	0.962
	8) I have the necessary supplies of work materials	0.972
	9) I understand the direction that this company is heading to	0.930
	10) The direction that my management provides has enabled me to carry out the tasks in my job	0.945
	11) My company provides means of sharing data	0.961
	12) At work, the sharing of data has helped me to carry out operational actions optimally	0.941
Employee Engagement - ENG (Schaufeli and Bakker, 2003)	1) At my work, I feel bursting with energy.	0.976
	2) At my job I feel strong and vigorous.	0.980
	3) When I get up in the morning, I feel like going to work	0.868
	4) I am enthusiastic about my job.	0.974
	5) My job inspires me.	0.924
	6) I am proud on the work that I do.	0.822
	7) I feel happy when I am working intensely	0.862
	8) I am immersed in my work	0.901
	9) I get carried away when I am working.	0.857
Employee Empowerment – EMP (Gretchen M. Spreitzer, 1995)	1) The work I do is very important to me	0.934
	2) My job activities are personally meaningful to me	0.965
	3) The work I do is meaningful to me	0.984
	4) I am confident about my ability to do my job	0.949
	5) I am self-assured about my capabilities to perform my work activities	0.957
	6) I have mastered the skills necessary for my job	0.885
	7) I have significant autonomy in determining how I do my job	0.959
	8) I can decide on my own how to go about doing my work	0.959
	9) I have considerable opportunity for independence and freedom in how I do my job	0.928
	10) My impact on what happens in my department is large	0.891
	11) I have a great deal of control over what happens in my department	0.944
	12) I have significant influence over what happens in my department	0.923

Construct	Item	SRW
Employee Performance - PERF (Mott, P.E., 1972)	1) In comparison with your coworkers, how do you classify your capacity to adapt to changes in the work processes?	0.863
	2) In comparison with your coworkers, how do you evaluate your reaction to situations of relative emergency (such as crisis, short deadlines, unexpected personal matters, etc)?	0.932
	3) In comparison with your coworkers, how do you evaluate the quality of your response to situations of relative emergency?	0.940
	4) In comparison with your coworkers, what is the efficiency level of your work? That is, do you use the available resources (money, people, equipment) adequately?	0.787
	5) In comparison with your coworkers, how do you evaluate your capacities to prevent or minimize potential problems before their occur?	0.780
	6) In comparison with your coworkers, how do you evaluate your efficacy in adapting to changes in the work processes?	0.945
	7) In comparison with your coworkers, how do you evaluate your speed in adapting to changes in the work processes?	0.944
	8) In comparison with your coworkers, how did your boss evaluated you in the last formal performance evaluation?	0.830
	9) In comparison with your coworker's productivity, how do you evaluate your production level in terms of quantity?	0.886
	10) In comparison with your coworkers, how do you evaluate the quality of your work?	0.914
Satisfaction with Life - LSF (Diener *et al.* 1985)	1) In most ways my life is close to my ideal.	0.893
	2) The conditions of my life are excellent.	0.887
	3) I am satisfied with my life	0.926
	4) So far I have gotten the important things I want in life	0.846
	5) If I could live my life over, I would change almost nothing.	0.786

Table 2 - Measurement scales

3.4 Validity

A descriptive analyzes of the data collected was done using the Software IBM SPSS, followed by a Hypothesis Test using modulation by Structural Equations. To determine to what extent the observed items are associated with their underlying factors, an exploratory factor analysis (EFA) was applied (Byrne, 2010). The IBM SPSS software was used to perform the EFA, in order to determine the latent variables supposedly underlying observed variables, revealing patterns of correlations in new domains of manifest variables (Haig, 2010), as the internal consistency of a scale should be determined before a test can be employed for research or examination purposes to ensure validity.

Furthermore, a confirmatory factor analysis (CFA) was also used to validate the dimensional structure suggested by the EFA (Jiménez-Guerrero *et al.*, 2014). To that end, the AMOS software was used to estimate the measurement model, with the CFA being afterwards applied to evaluate the validity of the constructs used in that model.

3.4.1 Exploratory factor analysis

The EFA's objective is to help understand how the observable variables are related to their respective latent variables (Byrne, 2013). In the present analysis, two methods were applied in order to access the data adequacy to the EFA:

- **The Kaiser-Meyer-Olkin (KMO) criteria**: used to evaluate the sample adequacy and to estimate the proportion of the items' variance that can be explained by a certain latent variable. The KMO is considered good if it results in a value between 0.7 and 0.8 and excellent when it is above 0.9.

- **Bartlett's Test for Sphericity:** it allows to examine the resemblance between the correlation matrix and the identity matrix, that is, tests if the correlation is strong enough to apply a factor analysis. The hypotheses to be tested are H0 (the correlation matrix is equal to the identity matrix, which means there is no significant correlation, and this hypothesis is rejected if the significance values are less than 0.05) and H1 (the correlation matrix is not equal to the identity matrix, which means there is a correlation, and the factor analysis is adequate and can be done).

After evaluating the data adequacy, each set of items was tested in terms of internal consistency (Hair *et al.*, 2006) and dimensionality (Jiménez-Guerrero *et al.*, 2014), through the:

- **Alpha Cronbach test:** it allows to test the internal consistency of scales, that is, to what extent all the items in a scale measure the same construct. The value should be at least 0.6 to assure consistency.

- **Item-total correlation:** it indicates an item's association with the total score of the other items, that is, it reveals the correlation of an item with the total scale when that

item is omitted. It usually assumes a value equal or superior to 0.40 and the bigger the value, the bigger the Cronbach alfa. This happens as when items with low values are removed, the Cronbach alfa value will increase.

All these indicators were obtained with the SPSS software and the results are presented in table 5 (see Annex 2). The data shows a good KMO, higher than 0.7 for all variables, which also passed on the Bartlett's Test for Sphericity, with a significance below 0.005, allowing the rejection of H0 and confirmation that the factor analysis is adequate. Furthermore, the used scales present reliable internal consistency once the variables present Cronbach's alpha values superior to 0.8 and the item-total correlation significantly above 0.40 for each of the items composing the variables.

3.4.2 Confirmatory factor analysis

In order to analyze the psychometric properties of the scales and the measurement model, the AMOS 22 software was used to perform a confirmatory factor analysis (CFA), thus assessing the fit between the obtained data and the conceptual model, which specifies the hypothesized causal relations between latent factors and their observed indicator variables. The CFA covers the validation of each one of the items of the constructs in the measurement model, previously to testing the relationship between the variables of the structural model (Nizar *et al.*, 2019). In that sense, the validity of each construct is achieved when each one of the adjustment indexes reaches an acceptable level (Ahmad *et al.*, 2016), and the more used ones are:

- **Incremental fit-index (IFI)**, **Tucker-Lewis index (TLI), comparative fit index (CFI)** – used to compare the quality of the model being tested (measurement or structural) to the quality of the model with the worst possible adjustment (called the baseline model). The valuables considered acceptable for these indexes are above 0.90.
- **Root mean square of error approximation (RMSEA)** – indicates how well the tested model (measurement or structural) adjusts to the sample of population. The valuables considered acceptable for this index are below 0.08, with values below 0.05 considered ideal.

- **Chi Square /Degree of freedom (CMIN/df)** – indicates if the adjustment of the tested model (measurement or structural) per degree of freedom used is acceptable. The values of this index should be between 2 and 5.

The results considering the measurement model in this study show a good fit of the final model IFI=0.944; TLI=0.941; CFI=0.944; RMSEA=0.049; CMIN/DF=2.848.

Additionally, the standard deviations (SD), square correlations, composite reliability (CRL) and the average variance extracted (AVE) were also calculated to test the measurement reliability of each latent variable. The CRL estimates the internal consistency of the item relatively to the construct, indicating the degree to which these items are consistent manifestations of the construct (Cunha *et al.*, 2017). The CRL must present a value of at least 0.7 to assure the reliability of each latent variable. The AVE measures the degree of variance that is explained by a certain construct, given the degree of variance resulting from measurement errors. To be considered valid, the AVE must present a value of at least 0.5. In this study, all the scales present values above 0.90 in the CRL and above 0.70 in the AVE, assuring good values of both measurements. Finally, discriminant validity is achieved when the measurement model is free from redundant items. The values of the correlations between the constructs are all smaller than 0.85 and the values of the squared correlations calculated for each construct (the square root of AVE, represented in Table 3 by the SD column) are less than the variance extracted for each correspondent construct, factors which confirm the discriminant validity.

	SD	HRP	ENB	ENG	EMP	PERF	LSF	CRL	AVE
HRP	0.923	**0.968**						0.967	0.852
ENB	0.912	0.714	**0.974**					0.967	0.832
ENG	0.917	0.549	0.593	**0.961**				0.940	0.840
EMP	0.888	0.304	0.403	0.496	**0.970**			0.937	0.788
PERF	0.901	0.059	0.082	0.158	0.277	**0.957**		0.928	0.812
LSF	0.869	0.244	0.247	0.438	0.222	0.127	**0.941**	0.939	0.755

Table 3 - Standard Deviation (SD); Correlations², Cronbach's Alpha (main diagonal), Composite reliability (CRL) and Average variance extracted (AVE)

3.5 Common Method Variance

The questionnaires are a common method to collect data in management research, providing the information necessary to measure the independent as well as dependent variables in a data analysis. However, the estimated impact of one variable on other variable is at risk of being biased due to the Common Method Variance (CMV). The CMV is the systematic variance shared among the variables, being usually inserted to the measures by the method of measurement rather than the theoretical constructs represented by them (Tehseen et al., 2017). This means that there is the risk of CMV when the systematic variance is introduced into the measures by the measurement technique (Doty and Glick, 1998), which can be also translated as the systematic error variance that is shared among variables which are measured with the same method (Richardson et al., 2009), which can bias the estimated relationships among variables. To minimize of risk of this phenomena, the following procedures were applied (Podsakoff et al., 2003): (i) the anonymity and confidentiality of all participants, who were also aware that there were no right or wrong answers, was assured; (ii) the several items were ordered in a random way; (iii) none of the scales used had bipolar numerical values nor verbal designations for the mid-points of the scales; and iv) the survey was composed by several sections. Furthermore, statistical approaches were applied to access the risk of CMV. A principal component analysis (unrotated solution) of the items revealed 10 factors with values above 1. They accounted for 88.9% of the total variance, the first of which explained only 36.2% of the variance, suggesting that there were no problems with the common method variance. A single-factor solution was tested (Podsakoff and Organ, 1986) and the fit of the model was very poor: IFI=0,471; TLI=0,452; CFI=0,470; RMSEA=0,150; CMIN/DF=8,898. Therefore, it can be concluded the absence of common method variance in this study.

CHAPTER IV - Results

4.1 Results of the Hypothesis Test

The Software Amos 22 was used to perform the CFA and the modulation by Structural Equations to test the proposed hypotheses. The Structural Equation Modeling (SEM) is a statistical modeling technique that provides a general and useful framework for statistical analysis. Given the nature of the measures and data, SEM is often the best choice for social sciences, and it presents an approach to data analysis that combines simultaneous linear regression and confirmatory factor analysis (Ecob and Cuttance, 1987). In SEM, there are two principal models, the measurement model and the structural model, with both measuring the latent variables. The SEM technique begins with developing the hypotheses based on a conceptual model, building and testing statistical causal models. Starting with a CFA based on the measurement model, followed by the path diagram that estimates the relationships between variables and tests the proposed hypotheses (Harrington, 2009), it is then possible to combine the validity and reliability analyzes with the hypothesis test. Thus, the structural model also defines the dependency relationships between those variables, assuming that all the relationships are cause-effect, and all the unknown variability sources are represented by errors, similar to the case of the measurement model. Hence, the structural model shows the direction and strength among the latent variables (Dell'Olio et al., 2018), but for that to be possible, first the measurement model must be acceptable in order to be possible to test the hypotheses through the structural model. Regarding the fit of the structural model, the results show a good fit IFI=0.912; TLI=0.907; CFI=0.911; RMSEA=0.045; CMIN/DF=2.701.

The results obtained from the structural model allow the analysis of the standardized estimated (r) and the statistical significance (p) of each hypothesis, resulting in its acceptance (r>0 and p<0.05) or in its rejection (r<0 or p>0.05). Furthermore, considering the role of the moderating variable CRM, the next step consisted in performing a Multi-group Moderation Test. First, the IBM SPSS software was used to categorize the original dataset in order to create two groups according to the average value of the CRM measurement, a group with LOW CRM with 158 respondents which were below the average, and a group with Hight CRM, with the remaining 195 respondents that were above the average. To test the presence of metric

invariance, the CFI of the structural model was compared to the CFI of the restrained structural model, which resulted in a difference bellow 0,01, which attests the metric invariance of both groups (Cheung and Rensvold, 2002). Therefore, it is verified that the respondents from each group answered the questions in a similar way and the answers are not biased. Then, using AMOS once more, the hypotheses previously raised went through a Hypothesis Test using SEM according to each group, to test the impacts of CRM on the proposed relationships. Neither of the groups had all the hypotheses statistically supported, with the Low CRM group not supporting H7 and H2 and the High CRM group not supporting H2, H4, H7 and H9. Table 4 presents the results of this procedure.

HYPOTHESIS				GLOBAL				LOW CRM				HIGH CRM			
				r	C.R.	P	CHECK	r	C.R.	P	CHECK	r	C.R.	P	CHECK
H1	HRP	▷	ENB	0.868	15.861	***	✓	0.857	10.798	***	✓	0,875	11.819	***	✓
H2	ENB	▷	PERF	-0.176	-2.376	***	⊗	-0.274	-2.597	0.005	⊗	-0.032	-0.321	0.374	⊗
H3	HRP	▷	ENG	0.773	14.075	***	✓	0.805	10.577	***	✓	0.733	9.236	***	✓
H4	ENG	▷	PERF	0.192	2.687	0.009	✓	0.202	1.952	0.026	✓	0.149	1.545	0.061	⊗
H5	HRP	▷	EMP	0.599	10.743	***	✓	0.614	8.004	***	✓	0.574	7.090	***	✓
H6	EMP	▷	PERF	0.506	7.671	0.004	✓	0.523	6.670	***	✓	0.493	5.330	***	✓
H7	ENB	▷	LSF	-0.24	-0.372	0.355	⊗	0.148	1.627	0.058	⊗	-0.164	-1.825	0.034	⊗
H8	ENG	▷	LSF	0.604	9.307	***	✓	0.457	4.889	***	✓	0.785	7.909	***	✓
H9	EMP	▷	LSF	0.066	1.215	0.112	⊗	0.136	1.808	0.036	✓	-0.021	-0.275	0.393	⊗

Table 4- Standardized Regression Summary

✓ : *Hypothesis supported* |⊗ : *Hypothesis not supported* | **r**: *Standardized Estimate* | **C.R.**: *Critical Ratio*| **p**: *Significance,* ***: *P=0.000*

4.2 Enablement, Engagement and Empowerment

4.2.1 HRM and Enablement

From the analysis of Table 4, it is possible to conclude that HRP has a positive impact in ENB (r=0.868; p=0.000), thus supporting H1. This result is supported by the literature showing that enabling employees relies on the adoption of HR practices that promote a work

environment that provides the tools needed to deal with employee obstructions. In other words, it can be seen in the way that organizations design jobs and match the right people with the right skills for the right job (Colenbaugh and Reigel, 2010; Permana *et al.*, 2015; Cable and DeRue, 2002; Hecht and Allen, 2005). This result is valid for both the group with Low CRM (r=0.857; p=0.000) and for the one with High CRM (r=0.875; p=0.000). This result can be an indication that good HR practices positively impact employee engagement during a crisis, especially if the company has a focus on crisis preparedness or prevention, as the strength of the relationship is slightly stronger for the High CRM group. That indicates that organizations with practices that promote employee enablement will generally be able to better face uncertainty and risk situations. This is in line with the literature supporting the view that HR practices are a vital tool to help companies navigate through turbulent times (Marchington and Kynighou, 2012).

4.2.2 HRM and Engagement

The outcomes in Table 4 show that HRP has a positive impact in ENG (r=0.773; p=0,000), thus supporting H3. This result is in accordance with the literature that highlights the importance of high-involvement HR practices that improve well-being at the workplace and help employees make a full cognitive, physical and emotional connection with their work roles (Kahn, 1990; Permana et al., 2015). Furthermore, according to the paper of Ordiz-Fuertes and Fernández-Sánchez (2003), organizations should have a focus on HR as a main generator of competitive advantage and emphasize the practices that increase employee motivation when they are inserted in environments where competitiveness largely depends on dynamic advantages, confirming that when companies are experiencing dynamic or turbulent business circumstances, they are more likely to adopt high-involvement work practices. This result is valid for the group with Low CRM (r=0.805; p=0.000) and for the one with High CRM (r=0.733; p=0.000), but it is stronger for the first group. This result highlights that companies unprepared to deal with a crisis can maintain a high level of employee engagement, which can actually be more relevant for these companies once they have low levels of crisis preparedness and prevention and need alternative ways to assure their business continuity. This result is in line with the literature (Manuti et al., 2020) providing evidence that it is through employees' attitudes that organizations can accomplish a proposed transformation and successfully maintaining it over time.

4.2.3 HRM and Empowerment

HRP was found to have a positive impact on EMP, thus supporting H5 (r=0.599; p=0.000). This result is in line with the literature, according to which progressive HRM practices approach empowerment as a system of articulated bundles of high level HRM systems and assign substantial decision-making rights and power to employees. For example, Marchington and Kynighou (2012) found that in coordinated market economies, where employee involvement and participation is more deeply embedded into the institutional structure of the country, employers are more likely to continue involving their staff in the process of crisis management. Likewise, Lai and Wong (2020) compared crisis management practices in the hotel industry between initial and pandemic stages of Covid-19 and changed the view of managers to a proactive perspective, as the respondents in the initial stage gave the highest priority to body temperature checks for customers while in the pandemic stage, they prioritized educating employees about the knowledge of epidemic prevention, empowering them to better deal with such situations and walk towards a less passive state. This result is valid for the group with Low CRM (r=0.614; p=0.000) and for the one with High CRM (r=0.574; p=0.000), but this positive relationship is stronger for companies that do not present CRM as a priority for their strategy, which can indicate that the measures adopted to manage crises can have a detrimental effect on the employees' perception of the level of responsibility and influence in the decision making process they held before, as in more uncertain situations companies feel the need to centralize the decision making power in an attempt to reduce risks. This conclusion is in line with Pfeffer (1978), who stated that organizational threats are likely to result in centralization, as crises provide a rationale for legitimately reiterating the need for centralized control, with individuals underestimating the extent to which their behavior can negatively contribute to the process of crisis management, reducing their response flexibility (Kiesler and Sproull, 1982; Bakonyi, 2018).

4.3 Employee Performance and Life Satisfaction

4.3.1 Enablement, Employee Performance and Life Satisfaction

From the obtained results, it was not statistically demonstrated that ENB has a positive impact in PERF (r=-0.176; p=0.000), thus not supporting H2. This result is valid for the group with Low CRM (r=-0.274; p=0.005) and for the one with High CRM (r=-0.032; p=0.374).

According to the literature, enabling workspaces make the employees feel comfortable to optimize their performance and the existence of a positive relationship between person-job fit and performance, with a high-level match between job and skills resulting in positive work outcomes (Caldwell and O'Reilly, 1990; Kristof-Brown and Johnson, 2005; Bhat, 2014). However, the positive relationship between ENB and PERF when organizations go through crises was not supported. This may be the case once during a crisis, the measures to evaluate employee performance might had to be changed and adapted, and the existing scales to measure PERF are not suitable to capture the relationship between ENB and PERF during a crisis. Additionally, some researchers argue that chronic work-related stress, better known as burnout, results in employees feeling emotionally exhausted and detached from work, which has a negative impact on their creative and innovation capability, ultimately resulting in a decrease on overall performance (Maslach, and Leiter, 2016). The tools used to enable employees may have led to an excessive pressure to maintain the levels of performance reported in the pre-covid-19 period, as during this pandemic the job demands were highly intensified and required sustained physical, cognitive and emotional effort and capabilities (Gabriel and Aguinis, 2021). Such pressures resulted in a significant number of workers feeling drained and reporting a decreased level of performance

Furthermore, the relationship between ENB and LSF is not significant (r=-0.24; p=0.355), thus H7 is not supported. This outcome may result from the impact Covid-19 had on the quality of life of most people who were affected by it, as the work conditions for most companies changed so drastically and so fast that having a high-level person-job fit was not sufficient to maintain a good level of satisfaction with life. This result is valid for the group with High CRM (r=-0.164; p=0.034) and for the group with Low CRM (r=0.148; p=0.058). This outcome is in line with a 2020 McKinsey report addressing the high cost of Covid-19 on life satisfaction, according to which the significant decline in the overall life satisfaction across Europe due to the pandemic was expected, as in addition to the anxiety caused by the health crisis and economic uncertainty, people's daily lives suffer several wide-ranging restrictions, especially regarding the physical-distancing rules, reduced incomes and unemployment concerns (Allas et al. 2020). Companies implementing more enabling practices during the Covid-19 may have increased the pressure employees were under to present certain performance standards

even during this extreme situation, which can lead to a prolonged work-related stress and, consequently, result in counterproductive work behaviors that negatively impact the overall performance (Bakker et al., 2014). Thus, enablement practices appear not the be able to positively impact LSF of employees during a turbulent situation or possibly the practices employed by companies during crises were not focused enough in helping the employees feel capable of properly performing their usual task under the new work reality enforced upon organizations.

4.3.2 Engagement, Employee Performance and Life Satisfaction

The outcomes in Table 4 show that ENG has a positive impact in PERF (r=0.192; p=0,009), thus supporting H4. This is in line with the literature, according to which authority can be an important motivator for employees to have a better performance and that empowerment can assist in the anticipation of a crisis through early warning, as well as in the management of that crisis, once jobs which empower employees with the skills, attitudes and opportunities necessary to cope with uncertainty will be more capable to deal with organizational change (Areiqat and Zamil, 2011; Cunningham, 2002). Accordingly, Jun and Rowley (2014) analyzed changes in the HRM, corporate culture, risk management and competitive strategy parts of management systems in terms of internal perceptions of impact in a crisis context and found that having an emphasis on HRM after the considered financial crisis positively impacted corporate performance. This result is valid for the group with Low CRM (r=0.202; p=0.026) but not for the one with High CRM (r=0.149; p=0.061), for which is not statistically proved that ENG positively impacts PERF. This may indicate that some of the measures implemented to manage the crisis might have affected the employee's ability to perform their work despite their motivation to do so, which resulted in an insignificant relationship between engaged employees and high levels of performance. In contrast, in companies with low levels of CRM, employee engagement had the expected positive impact in performance levels.

Furthermore, ENG appears to have a positive impact in LSF (r=0.604; p=0.000), thus supporting H8. This result is valid for the group with Low CRM (r=0.457; p=0.000) and for the one with High CRM (r=0.785; p=0.000), with a stronger effect found in this last group. This may reflect that during crisis situations, companies that implement more measures do deal with the crisis and are more prepared to deal with the uncertainty, are more capable of keeping their

employees engaged to carry on their tasks in a proper manner despite the changes to the workplace resultant from the crisis. This, in turn, has a positive effect on the life satisfaction of employees possibly because they are under more stressful and precarious situations and the role of ENG in LSF is more pronounced than in normal circumstances.

4.3.3 Empowerment, Employee Performance and Life Satisfaction

Finally, the variable EMP was found to have a positive impact on PERF, thus supporting H6 (r=0.506; p=0.004). This is in line with the literature according to which employees who are more autonomous and participate on the decision-making process can contribute to organizational performance, and a sense of authority can be an important motivator for employees to have a better performance (Seibert *et al.*, 2004; Huselid, 1995; Permana, 2021). This result is valid for the group with Low CRM (r=0.523; p=0.000) and for the one with High CRM (r=0.493; p=0.000), with a stronger effect for the first group. This indicates that the considered positive relationship is present in companies with different levels of crisis management practices and even more in the ones with low levels of CRM, which might suggest that empowerment practices can be an alternative way to ensure or promote business continuity during crisis situations.

Furthermore, the relationship between EMP and LSF is not significant (r=0.066; p=0.112), thus H9 is not supported. This is contrary to most of the literature regarding this matter. However, these past studies were carried out in non-crisis context and only considered the existence of a positive relationship in a "normal" situation. The Covid-19 altered the usually positive effect that EMP has on LSF, therefore, companies should be aware that implementing empowering practices during a crisis with the aim of improving the employee's satisfaction and well-being would possibly not be effective. This result is valid for the group with High CRM (r=-0.021; p=0.393) but not for the one with Low CRM (r=0.136; p=0.036), for which a positive relationship between EMP and LSF was found. This may be an indicator that the practices employed by companies to deal with a crisis have a negative effect in the relationship between employees' EMP and LSF, as H9 was validated for the group of companies that invested less on those measures. Studies regarding organizational decline and downsizing often involving crisis established a connection between numerous negative outcomes of declining firms such as decreasing levels of morale, trust, upward communication and innovation, and the increasing

levels of conflict and centralization. Accordingly, Mishra (1996) hypothesized that in response to crises, companies tend to reduce the complexity of communication, centralizing power and influence, and increase concerns regarding efficiency, which leads to a conservative management of resources and an intensification of organizational behavioral rigidity.

CHAPTER V - Conclusions, Contributions, and Future Research

5.1 General conclusions

Today, more than ever, companies are aware that crises are periods when businesses are put to the test. Being prepared to respond to these situations has transitioned from a convenient skill to a "must have" for organizations that are committed to remain sustainable and competitive in the short, medium and long term. From the bibliometric analysis carried out, it can be concluded that CRM is a topic of growing importance for companies that want to endure and survive to unexpected changes in the business environment, thus maintaining a proper control of organizational risks and maximizing value creation for the stakeholders. The integration of human resource systems in crisis management appears to be crucial to maintain an organization sustainable and competitive. The study of the references that arise in HRM and CRM articles played a vital role to explore and understand the origin of the scientific information acknowledged and used by the investigators in these areas. Despite the limited number of sources found about HRM and CRM, the systematic review carried out helped to identify empirical research relevant for this paper, besides opening doors for future investigation. Accordingly, Cooke *et al.* (2020) resourced to the analysis of the publication trends indicated by keywords and found that research published in the International Journal of Human Resource Management shifted from a collective focus with institutional implications towards more individual concerns with organizational repercussions with relevance to HRM practices.

The role of HRM is the process of managing crises has become a prominent topic in recent literature. Once the employees' attitudes are the key factor for organizations to be able to conduct a proposed transformation and successfully maintaining it over time (Manuti *et al.*, 2020), employees that are able to cope with change show higher readiness for change scores (Cunningham, 2002), which results in a more active participation in redesigning activities and awareness of the personal contribution to the whole process. The growing instability of the business context has led companies to search for ways to be better prepared for uncertain situations. Between natural hazards, economic and financial crises and, more recently, world pandemics, organizations and their employees are subject to pressures from many different angles. The most recent crisis, the Covid-19, brought more attention to the topic of CRM and

the role that HRM can have, as this is a crisis that directly affects the employees' health and life unlike the more common types of crises, which brought more fear and apprehension to organizations. The results are then consistent with the literature recently published on this topic. For instance, He *et al.* (2021) found that socially responsible human resource management (SRHRM) negatively impacts employee fears of external threats, once it enhances trust in the organizations, with the strength of the Covid-19 pandemic positively moderating the effect of SRHRM on employee fears. The results of this study led to the conclusion that HR practices can promote employee enablement, engagement and empowerment even during crisis situations. Also, as Caligiuri *et al.* (2020), who focused their study on international HRM to address Covid-19 challenges and help guiding managers as they struggle with difficult choices, outlined that while the financial crisis in 2007 highlighted the role of talented Chief Financial Officers, the Covid-19 pandemic is highlighting the role of Chief Human Resource Officers.

It was expected that promoting practices that foster the engagement, empowerment and enablement of employees would have a positive effect on their performance and life satisfaction. However, in the context of a crisis, these relationships do not appear to be as significant as in non-crisis situation, possibly because these practices are somewhat outweighed by crisis management measures. The hypotheses regarding the impacts on performance were mostly found to be statistically significant, yet that is not the case for the impacts in life satisfaction. In fact, the results regarding the impact on this construct were mostly not significant for the general population. Conversely, these results have to interpreted considering the moderating role of CRM, as they show that CRM had an impact in all the relationships considered, once none of the standardized estimates of each hypothesis were the same for both groups. However, the direction of the moderation effect did not always follow the expected direction suggested in the literature. A possible explanation can be that companies with higher level of crisis prevention and preparedness might be too focused on maintaining their levels of productivity and profitability during those turbulent times and pay less attention to promoting HRM practices that contribute to higher levels of performance and life satisfaction (Mishra, 1996). Accordingly, Bakonyi (2018) found that during crisis periods, organizations turn to centralization to gain efficiency, once the more immediate benefits of a centralized authority, such as whole company focus, simpler communication and faster decision making, override the possible long-term disadvantages, such as decreased innovative and flexible behavior. Managing crises such as the

Covid-19 requires companies to make drastic changes to still be able to operate in those periods and implement practices that may be incompatible or override existing HRM practices that usually lead to high levels of performance and life satisfaction. The impact of such practices is highly dependent of the way in which companies communicate them to the employees and prepare them to adapt to a new work reality, and with measures implemented to deal with crises being possibly disruptive and harmful to workers, HRM might well become a tool to mitigate these effects.

5.2 Contributions and management recommendations

This study contributed to explore the intersection between Human Resource Management practices and Crisis Management in companies, opening a path for further investigations and shedding light on how organizations can survive during uncertain and turbulent times. Managers could use the scales developed in this study to evaluate their own organizations and assess how the employees feel about the role or effectiveness of current HRM practices during the Covid-19 pandemic. By doing so, they can help identify opportunities to improve them, so companies are better prepared to deal with future crises. Some management recommendations can be drawn from this research, such as:

- Define priorities at the time of a pandemic, or some other type of crisis, and outline how HRM can help to fulfill them and to build organizational resilience;
- Understand which bundles/configurations of HRM practices have enabled effective organizational adaptation and prioritization, and which ones have failed to do so;
- Clarify what should be the key performance indicators of the HRM function during a crisis;
- Develop a focus on transformational leadership with an emphasis on Chief Human Resource Officers and creation of a sense of purpose;
- Define how companies can support and evaluate their practices regarding the support of managers before and after the crisis;
- Adopt high-involvement work practices when companies are inserted in a dynamic context, that is, involve the employees in the process of decision making, thus leading to a higher degree of acceptance towards changes;

- Consider that policies implemented to deal with a crisis will only be effective if properly communicated to employees as the way employees perceive and react to these actions determines their successful implementation;

- Recognize the importance of socially responsible human resource management, as it enhances trust in the organizations and thus has a negative impact on employee fears of external threats.

Furthermore, no similar studies were found to be made in Portugal and very few elsewhere on the effect of the Covid-19 crisis. The relationship between HRM and CRM is still a relatively unexplored field with a small body of literature. This paper contributes to better understanding the role that HRM can have in helping companies manage crises. There is a need for further exploration of the concepts and the links between the academia and business worlds to draw accurate conclusions about possibly existing relationships. Empirical investigations that strengthen the contribution of human resource management practices to crisis management can be a source of evidence-based arguments and methods to support good HRM practices, helping business leaders to contribute to value creation, business continuity and resilience. The Covid-19 crisis, as a global shock, reinforces the idea that HRM professionals have an opportunity, or maybe a responsibility, to make a difference by providing inspired responses, grounded in state-of-the-art academic work, to face the growing challenges of the future.

5.3 Limitations and further research

Despite the contributions, this study also has some limitations that provide opportunities for further investigation. Several articles relating HRM and CRM are now being published since companies are still fighting to deal with this pandemic, conducting a similar study after the crisis and organizations start returning to their normal stages can be helpful to understand the HRM measures that helped companies to survive with less damage and in which direction the literature relating HRM and CRM followed after the experience of Covid-19. The data source for this research was a survey, which resulted in a cross-sectional data analysis, and therefore, the inferences regarding causality are limited. Nevertheless, the presumed causal ordering was strongly based on previous literature, which was afterward suggested in the SEM. However,

other alternative causal models are possible and future investigators could examine this option by relying on longitudinal studies. This study included different sectors, but future studies could benefit from analyzing a particular sector or industry to draw more specific conclusions. It could also be interesting to focus the study on companies from a specific region in the country as differences in factors such as income, average population's age and employment opportunities between the main cities and the less populated isolated regions can influence the company's availability to adopt innovative and complex measure to manage their Human Resources and crisis situations. Lastly, some complex concepts such as HRM and CRM can be hard to measure thus, relying in a consistent source of data is a significant and demanding challenge of management sciences. In this study, the employee performance variable was measured from the employee perspective in comparison with the performance of the coworkers and the use of other performance measures could also be considered by future researchers.

Finally, some specific suggestions for further investigations are:

1) Study how to manage global uncertainty in the fields of leadership and talent management, collaborating under stress, and managing health and safety, with the help of HRM practices;
2) Investigating how to facilitate global work in the fields of global teams, virtual collaboration and international assignments, and on how to redefine organizational performance;
3) Research how differences in age, culture, education, income and industry may affect the job performance of people who are forced to change their work condition due to a crisis;
4) Study the recovery stage to complete the research of the Covid-19 crisis cycle and to access if the changes in strategies used by companies lead to superior outcomes or a higher rate of recovery;
5) Understand if the recent global work arrangements are the "new normal" or if they will revert to the pre-covid-19 patterns or even a combination of both possibilities;
6) Replicate in other studies the hypotheses regarding the effects in life satisfaction to compare the results and draw more accurate conclusions.

REFERENCES

Ahmad, S., Zulkurnain, N., and Khairushalimi, F. (2016). Assessing the Validity and Reliability of a Measurement Model in Structural Equation Modeling (SEM). *British Journal of Mathematics and Computer Science,* 15(3), 1–8. https://doi.org/10.9734/bjmcs/2016/25183

Akhmetshin, E. M., Ilyina, I. A., Kulibanova, V. V., and Teor, T. R. (2019). Employee Engagement" Management Facilitates the Recovery from Crisis Situations. *Communication Strategies in Digital Society Workshop* (ComSDS). doi:10.1109/comsds.2019.8709645

Alariki, G., and Al-Abed, M. S. (2021). The Impact of Crisis Management on Employee's Performance in the Yemeni Oil and Gas Industry. *Journal of Impact*, *2*(1), 16-27. https://doi.org/10.48110/joi.v2i1.17

Allas, T., Chinn, D., Pal, E. S., and Zimmerman, W. (2020). Well-being in Europe: Addressing the high cost of COVID-19 on life satisfaction. Public Sector Practice report. McKiney & Company

Anitha, J. (2014). Determinants of employee engagement and their impact on employee performance. *International journal of productivity and performance management*, 63 (3), 308-323. https://doi.org/10.1108/IJPPM-01-2013-0008

Areiqat, A., and Zamil, A. (2011). The role of empowerment in crisis management in business organizations. *Asian Journal of Business Management*, *3*(3), 188-195.

Ashforth, B. E., and Humphrey, R. H. (1995). Emotion in the workplace: A reappraisal. *Human Relations*, 48(2), 97-125.

Bakker, A. B., Demerouti, E., & Sanz-Vergel, A. I. (2014). Burnout and work engagement: The JD–R approach, *Annual Review of Organizational Psychology and Organizational Behavior,* 1, 389-411, https://doi.org/10.1146/annurev-orgpsych-031413-091235

Bakker, A. B., Schaufeli, W. B., Leiter, M. P., and Taris, T. W. (2008). Work engagement: An emerging concept in occupational health psychology. *Work and Stress*, 22(3), 187–200. http://doi.org/10.1080/02678370802393649

Bakonyi, Z. (2018). Why do firms centralise their strategic decision-making during crisis? A qualitative study. *Journal of Organizational Change Management,* 31(5), 1191-1205. https://doi.org/10.1108/JOCM-12-2016-0303

Bedarkar and Pandita (2014). A study on the drivers of employee engagement impacting employee performance. *Procedia - Social and Behavioral Scien*ces, 133, 106-115. Doi: https://doi.org/10.1016/j.sbspro.2014.04.174

Bhat, Z. H. (2014). Job matching: the key to performance. *International Journal of Research in Organizational Behavior and Human Resource Management*, 2(4), 257-269.

Boxall, P., and Purcell, J. (2008). Strategy and Human Resource Management. 2nd edition, New York: Palgrave MacMillan, ISBN 978-1-403992-10-9.

Brown, D. R., and Harvey, D. (2006). An Experimental Approach to Organization development. Seven Edition, *Pearson Education*, *166*.

Bundy, J., Pfarrer, M.D., Short, C.E. and Coombs, W.T. (2017). Crises and crisis management: integration, interpretation, and research development. *Journal of Management*, 43 (6), 1661-1692. https://doi.org/10.1177/0149206316680030

Byrne, B. M. (2013). Structural equation modeling with AMOS: Basic concepts, applications, and programming, second edition. *Structural Equation Modeling with AMOS: Basic Concepts, Applications, and Programming*, Second Edition. Taylor and Francis. https://doi.org/10.4324/9780203805534

Byrne, B.M. (2010). Structural equation modelling with AMOS: basic concepts, applications, and programming. 2nd edition. New York: Routledge, Taylor and Francis Group.

Cable, D. M., and DeRue, D. S. (2002). The convergent and discriminant validity of subjective fit perceptions. *Journal of Applied Psychology*, 87(5), 875.

Caldwell, D. F., and O'Reilly III, C. A. (1990). Measuring person-job fit with a profile-comparison process. *Journal of Applied Psychology*, 75(6), 648.

Caligiuri, P., De Cieri, H., Minbaeva, D., Verbeke, A., and Zimmermann, A. (2020). International HRM insights for navigating the COVID-19 pandemic: Implications for future research and practice. *Journal of International Business Studies*, 51(5), 697-713

Cameron, K.S. and Spreitzer, G.M. (2012). The Oxford Handbook of Positive Organizational Scholarship. Oxford University Press: Oxford, UK.

Carnevale, J. B., and Hatak, I. (2020). Employee adjustment and well-being in the era of COVID-19: Implications for human resource management. *Journal of Business Research*, 116, 183-187. https://doi.org/10.1016/j.jbusres.2020.05.037

Chen, C. J., and Huang, J. W. (2009). Strategic human resource practices and innovation performance—The mediating role of knowledge management capacity. *Journal of business research*, 62(1), 104-114.

Cheung, G. W., & Rensvold, R. B. (2002). Evaluating goodness-of-fit indexes for testing measurement invariance. *Structural Equation Modeling*, 9(2), 233–255. https://doi.org/10.1207/S15328007SEM0902_5

Clair, R., Gordon, M., Kroon, M., and Reilly, C. (2021). The effects of social isolation on well-being and life satisfaction during pandemic. *Humanities and Social Sciences Communications*, 8(1), 1-6. https://doi.org/10.1057/s41599-021-00710-3

Colenbaugh, R. and Reigel, B. (2010). Enabling, engaging, and rewarding employees. A Study of World-at-Work Reward Professionals. *HayGroup*.

Conger, J.A and Kanungo, R.N. (1998). The empowerment process: Integrating theory and practice. *Academy of Management Review*, 13(3), 471-482.

Cooke, F. L., Dickmann, M., and Parry, E. (2020). IJHRM after 30 years: taking stock in times of COVID-19 and looking towards the future of HR research. *The International Journal of Human Resource Management,* 32(1), 1-23.

Cunha, M., Loureiro, N., Duarte, J., Carvalho, F., and Correspondente, A. (2017). Estrutura fatorial da escala de dignidade em doentes com necessidades de cuidados paliativos. *Millenium*, 2(2), 41–56. https://doi.org/10.29352/mill0202e.03

Cunningham, C. E., Woodward, C. A., Shannon, H. S., MacIntosh, J., Lendrum, B., Rosenbloom, D., and Brown, J. (2002). Readiness for organizational change: A longitudinal study of workplace, psychological and behavioural correlates. *Journal of Occupational and Organizational psychology*, 75(4), 377-392.

Dayton, B. W. (2004). Managing Crises in the Twenty First Century. *International Studies Review*, 6(1), 165-194.

Delaney, J. T., and Huselid, M. A. (1996). The impact of human resource management practices on perceptions of organizational performance. *Academy of Management journal*, 39(4), 949-969

Dell'Olio, L., Ibeas, A., Oña, J. de, and Oña, R. de. (2018). Structural Equation Models. *Public Transportation Quality of Service* (pp. 141–154). Elsevier. https://doi.org/10.1016/b978-0-08-102080-7.00008-2

Diener, E., Emmons, R. A., Larsen, R. J., and Griffin, S. (1985). The Satisfaction With Life Scale. *Journal of Personality Assessment,* 49(1), 71-75, .doi:10.1207/s15327752jpa4901_13

Doty, D. H., and Glick, W. H. (1998). Common methods bias: does common methods variance really bias results?. *Organizational research methods*, 1(4), 374-406.

Ecob, R., & Cuttance, P. (1987). An overview of structural equation modeling. In *P. Cuttance and R. Ecob (Eds.), Structural modeling by example: Applications in educational, sociological, and behavioral research* (p. 9–23). Cambridge University Press.

Fearn-Banks, K. (1996). Crisis Communication: A Casebook Approach (3th edition), *Lawrence Erlbaum Associates Publishers*, Mahwah, NJ

Ferreira, P., Gabriel, C., Faria, S., Rodrigues, P., and Sousa Pereira, M. (2020). What if employees brought their life to work? The relation of life satisfaction and work engagement. *Sustainability,* 12(7), 2743.

Fisher, C. D. (2010). Happiness at work. *International journal of management reviews*, 12(4), 384-412.

Fleck, S. and Inceoglu, I. (2010). A comprehensive framework for understanding and predicting engagement. Handbook of Employee Engagement, 31-42.

Gabriel K.P. & Aguinis H. (2021), How to Prevent and Combat Employee Burnout and Create Healthier Workplaces During Crises and Beyond, *Business Horizons,* Journal Pre-proofs https://doi.org/10.1016/j.bushor.2021.02.037

Gould-Williams, Julian (2003). The importance of HR practices and workplace trust in achieving superior performance: A study of public-sector organizations. *International Journal of Human Resource Management,* 14(1), 28-54, doi: 10.1080/09585190210158501

Gunnigle, P., Lavelle, J. and Monaghan, S. (2013). Weathering the storm? Multinational companies and human resource management through the global financial crisis. *International Journal of Manpower*, 34 (3) 214-231. https://doi.org/10.1108/IJM-04-2013-0078

Haig, B.D. (2010). Abductive Research Methods. *International Encyclopedia of Education*, 3th edition, 77-82. https://doi.org/10.1016/B978-0-08-044894-7.01688-2.

Hair, J., Black, W., Babin, B., Anderson, R., and Tatham, R. (2006). Multivariate Data Analysis. (P. P. Hall, Ed.) NJ: Upper Saddle River.

Hamblin, R. L. (1958). Leadership and crises. *Sociometry*, 21(4), 322–335.

Han, J.H., Kang, S., Oh, I.-S., Kehoe, R.R. and Lepak, D.P. (2019). The goldilocks effect of strategic human resource management? Optimizing the benefits of a high-performance work system through the dual alignment of vertical and horizontal fit. *Academy of Management Journal,* 62(5), 1388-1412

Harrington, D. (2009). Confirmatory factor analysis. Oxford University Press, Oxford, New York

Harter, J. K., Schmidt, F. L., and Keyes, C. L. M. (2003). Well-being in the workplace and its relationship to business outcomes: A review of the Gallup studies. In C. L. M. Keyes and J. Haidt (Eds.), *Flourishing: Positive psychology and the life well-lived* (p. 205–224). American Psychological Association. https://doi.org/10.1037/10594-009

Harvey, S. and Haines, V.Y. ii (2005). Employer treatment of employees during a community crisis: the role of procedural and distributive justice. *Journal of Business and Psychology*, 20 (1), 53-68.

He, J., Mao, Y., Morrison, A.M. and Coca-Stefaniak, J.A. (2021). On being warm and friendly: the effect of socially responsible human resource management on employee fears of the threats of COVID-19. *International Journal of Contemporary Hospitality Management*, 33 (1), 346-366, https://doi.org/10.1108/IJCHM-04-2020-0300

Hecht, T. D., and Allen, N. J. (2005). Exploring links between polychronicity and well-being from the perspective of person–job fit: Does it matter if you prefer to do only one thing at a time?. *Organizational behavior and human decision processes*, 98(2), 155-178. https://doi.org/10.1016/j.obhdp.2005.07.004

Herbane, B. (2010). The evolution of business continuity management: A historical review of practices and drivers. *Business history*, 52(6), 978-1002.

Hollingsworth TD, Klinkenberg D, Heesterbeek H, Anderson RM. (2011). Mitigation strategies for pandemic influenza A: balancing conflicting policy objectives. PLoS Comput Biol, 7(2), e1001076.

Howard, L. W., and Foster, S. T. (1999). The influence of human resource practices on empowerment and employee perceptions of management commitment to quality. *Journal of Quality Management*, 4(1), 5-22.

Huselid, M.A. (1995). The impact of human resource management: an agenda for the 1990s. *International Journal of Human Resource Management,* 1(1), 17– 43.

IHR 2005, World Health Oganization (2005). *International Health Regulations*, 2nd edition, article 1, WHO Press, Switzerland

Jiang, K., Lepak, D. P., Han, K., Hong, Y., Kim, A., and Winkler, A. L. (2012). Clarifying the construct of human resource systems: Relating human resource management to employee performance. *Human Resource Management Review*, 22(2), 73-85.

Jiménez-Guerrero, J. F., Gázquez-Abad, J. C., and Linares-Agüera, E. del C. (2014). Using standard CETSCALE and other adapted versions of the scale for measuring consumers' ethnocentric tendencies: An analysis of dimensionality. *BRQ Business Research Quarterly*, 17(3), 174–190. https://doi.org/10.1016/j.cede.2013.06.003

Jones, M. D. (2006). Which is a better predictor of job performance: Job satisfaction or life satisfaction?. Journal *of Behavioral and Applied Management*, *8*(1), 20-42.

Joo, B.-K., and Lee, I. (2017). Workplace happiness: work engagement, career satisfaction, and subjective well-being. *Evidence-Based HRM: a Global Forum for Empirical Scholarship*, 5(2), 206–221.doi:10.1108/ebhrm-04-2015-0011

Judge, T. A., and Hulin, C. L. (1993). Job satisfaction as a reflection of disposition: A multiple source causal analysis. *Organizational Behavior and Human Decision Processes*, 56(3), 388-421.

Jun, W., and Rowley, C. (2014). Change and continuity in management systems and corporate performance: Human resource management, corporate culture, risk management and corporate strategy in South Korea. *Business History*, 56(3), 485-508.

Kahn, W.A. (1990). Psychological conditions of personal engagement and disengagement at work. *Academy of Management Journal*, 33(4), 692–724.

Katou, A. A. (2017). How does human resource management influence organisational performance? An integrative approach-based analysis. *International Journal of Productivity and Performance Management,* 66, (6), 797-821. https://doi.org/10.1108/IJPPM-01-2016-0004

Kiesler, S. and Sproull, L. (1982). Managerial response to changing environments: Perspectives on problem sensing from social cognition. *Administrative Science Quarterly*, 27(4), 548-570.

Kristof-Brown, A. L., Zimmerman, R. D., and Johnson, E. C. (2005). Consequences OF INDIVIDUALS'FIT at work: A meta-analysis OF person–job, person–organization, person–group, and person–supervisor fit. *Personnel Psychology*, 58(2), 281-342.

Lai, I. K. W., and Wong, J. W. C. (2020). Comparing crisis management practices in the hotel industry between initial and pandemic stages of COVID-19. *International Journal of Contemporary Hospitality Management*, 32(10), 3135-3156, doi: 10.1108/IJCHM-04-2020-0325

Lambert, E. G., Kim, B., Kelley, T., and Hogan, N. L. (2013). The association of affective and continuance commitment with correctional staff life satisfaction. *The Social Science Journal*, *50*(2), 195-203.

Lepak, D. P., Liao, H., Chung, Y., and Harden, E. E. (2006). A conceptual review of human resource management systems in strategic human resource management research. In J. J. Martocchio (Ed.), *Research in personnel and human resource management*, Vol. 25 (pp. 217–271), Greenwich, CT: JAI Press.

Li, J. (2015). Perceived competence, autonomy, and subjective happiness: The mediating role of job crafting. *Osaka University Knowledge Archive*, *64*(4), 91-104.

Luechinger, S., Stutzer, A., and Winkelmann, R. (2006). The happiness gains from sorting and matching in the labor market. Discussion paper, University of Zurich

Lyubomirsky, S., King, L., and Diener, E. (2005). The benefits of frequent positive affect: Does happiness lead to success? *Psychological Bulletin*, 131(6), 803–855

Mache S., Vitzthum K., Klapp B.F. y Danzer, G. (2014). Surgeons' work engagement: influencing factors and relations to job and life satisfaction. *Surgeon*, 12 (4), 181–190. doi: 10.1016/j.surge.2013.11.015

Maheshwari, S., and Vohra, V. (2015). Identifying critical HR practices impacting employee perception and commitment during organizational change. *Journal of Organizational Change Management*, 28 (5), 872-894, https://doi.org/10.1108/JOCM-03-2014-0066

Manuti, A., Giancaspro, M. L., Molino, M., Ingusci, E., Russo, V., Signore, F., Zito., M, Cortese, C. G. (2020). "Everything will be fine": A study on the relationship between employees'

perception of sustainable HRM practices and positive organizational behavior during COVID19. *Sustainability* (Switzerland), 12(23), 1-17. doi:10.3390/su122310216

Marchington, M. and Grugulis, I. (2000). "Best Practice" Human Resource Management: Perfect Opportunity or Dangerous Illusion?. *International Journal of Human Resource Management*, 11(6), 1104–24.

Marchington, M., and Kynighou, A. (2012). The dynamics of employee involvement and participation during turbulent times. *The International Journal of Human Resource Management*, 23(16), 3336-3354.

Maslach, C., & Leiter, M. P. (2016). Understanding the burnout experience: recent research and its implications for psychiatry. World psychiatry, 15(2), 103-111.

Mazzei, A. (2014). Internal communication for employee enablement. Corporate Communications: An International Journal, 19(1), 82–95. doi:10.1108/ccij-08-20120060

Mazzei, A. (2018), "Employee engagement", in Heath, R.L. and Johansen, W. (Eds), The International Encyclopedia of Strategic Communication, Wiley-Blackwell, Boston.

Mazzei, A., Butera, A. and Quaratino, L. (2019), "Employee communication for engaging workplaces", Journal of Business Strategy, 40(6), p 23-32. https://doi.org/10.1108/JBS-03-2019-0053

Meyer, J. P., and Allen, N. J. (1997). Commitment in the workplace: Theory, research, and application. Sage publications.

Mills, M. J., Culbertson, S. S., and Fullagar, C. J. (2012). Conceptualizing and measuring engagement: An analysis of the Utrecht Work Engagement Scale. *Journal of Happiness Studies*, 13(3), 519-545.

Mishra, A. K. (1996). Organizational responses to crisis: the centrality of trust. In Kramer, Roderick M. and Thomas Tyler (eds.) *Trust In Organizations*. Newbury Park, CA: Sage. 1996. 261-287.

Mott, P. E. (1972). *The characteristics of effective organizations*. New York: Harper and Row.

Nazir, O., and Islam, J. U. (2017). Enhancing organizational commitment and employee performance through employee engagement. *South Asian Journal of Business Studies*, 6(1), 98-114. https://doi.org/10.1108/SAJBS-04-2016-0036

Nizamidou, C., and Vouzas, F. (2018). MHR. Providing a new perspective in HR in terms of crisis management. *International Journal of Business Science and Applied Management*, 13(1), 15-25.

Nizar, J., Ali, M. W., Tuan Amran, T. A., Alias, H., and Chik, Z. (2019). Assessment Model for Construct Occupational Accident Using Confirmatory Factor Analysis. *E3S Web of Conferences*, *90*, 03004. https://doi.org/10.1051/e3sconf/20199003004

Ordiz-Fuertes, M., & Fernández-Sánchez, E. (2003). High-involvement practices in human resource management: concept and factors that motivate their adoption. *International Journal of Human Resource Management,* 14(4), 511-529.

Park, J., T.P. Seager, P.S.C. Rao, M. Convertino, and I. Linkov. (2013). Integrating risk and resilience approaches to catastrophe management in engineering systems. *Risk Analysis* 33(3): 356–367.

Patterson, M., West, M., Lawthom, R. and Nickell, S. (1997). The Impact of People Management Practices on Business Performance. London Institute of Personnel and Development.

Pavot, W., and Diener, E. (1993). Review of the Satisfaction With Life Scale. Psychological *Assessment*, 5, 164–172.

Pavot, W., Diener, E., Colvin, C. R., and Sandvik, E. (1991). Further Validation of the Satisfaction With Life Scale: Evidence for the Cross-Method Convergence of Well-Being Measures. *Journal of Personality Assessment*, 57(1), 149-161.doi:10.1207/s15327752jpa5701_17

Pearson, C. M., J. A. Clair (1998). Reframing Crisis Management. *Academy of Management Review* 23 (1), 59–76.

Permana, I. (2021). Using structural equation modelling (SEM) to construct the model for cultivating employee excellence through engagement, enablement, and empowerment. *Firm Journal of Management Studies*, *6*(1), 14-36.

Permana, I., Tjakraatmadja, J. H., Larso, D., and Wicaksono, A. (2015). Exploring Potential Drivers of Employee Engagement, Enablement, and Empowerment: A Quest Toward Developing a Framework for Building Sustainable Employee Excellence for Manufacturing Environment in Indonesia. *Mediterranean Journal of Social Sciences*, 6(2), 577-587, Doi:10.5901/mjss.2015.v6n2s1p577

Pfeffer, J. (1978). Organizational design. Arlington Heights, IL: Harlan Davidson.

Podsakoff, P. M., and Organ, D. W. (1986). Self-Reports in Organizational Research: Problems and Prospects. *Journal of Management,* 12(4), 531–544. https://doi.org/10.1177/014920638601200408

Podsakoff, P. M., MacKenzie, S. B., Lee, J. Y., and Podsakoff, N. P. (2003). Common Method Biases in Behavioral Research: A Critical Review of the Literature and Recommended Remedies. *Journal of Applied Psychology*, 88 (5), 879–903, https://doi.org/10.1037/0021-9010.88.5.879

Polo-Vargas, J. D., Fernández Ríos, M., Bargsted, M., Ferguson Fama, L., and Rojas-Santiago, M. (2017). The relationship between organizational commitment and life satisfaction: The mediation of employee engagement. *Universia Business Review*, 54 (2), 110-145.

Pradhan, R. K., Hati, L., and Kumar, U. (2017). Impact of employee wellbeing on psychological empowerment: mediating role of happiness. *International Journal of Manufacturing Technology and Management,* 31(6), 581-595, doi:10.1504/ijmtm.2017.089083.

Rich, B. L., Lepine, J. A., and Crawford, E. R. (2010). Job engagement: Antecedents and effects on job performance. *Academy of management journal,* 53(3), 617-635.

Richardson, H. A., Simmering, M. J., and Sturman, M. C. (2009). A tale of three perspectives: Examining post hoc statistical techniques for detection and correction of common method variance. *Organizational Research Methods*, 12(4), 762-800.

Rode, J. C. (2004). Job satisfaction and life satisfaction revisited: A longitudinal test of an integrated model. *Human relations*, 57(9), 1205-1230.

Saks, A. M. (2006). Antecedents and consequences of employee engagement. *Journal of Managerial Psychology,* 21 (7), 600-619, https://doi.org/10.1108/02683940610690169

Saks, A. M., and Ashforth, B. E. (2002). Is job search related to employment quality? It all depends on the fit. *Journal of Applied Psychology, 87*(4), 646–654. https://doi.org/10.1037/0021-9010.87.4.646

Sawalha, I.H.S., Jraisat, L.E. and Al-Qudah, K.A.M. (2013). Crisis and disaster management in Jordanian hotels: practices and cultural considerations. *Disaster Prevention and Management: An International Journal*, 22 (3), 210-228.

Schaufeli, W.B. and Bakker, A.B. (2004). Job demands, job resources and their relationship with burnout and engagement: a multi-sample study. *Journal of Organizational Behavior*, 25 (3), 293-315.

Schaufeli, W.B., and Bakker, A.B. (2003). UWES: Utrecht Work Engagement Scale: test manual. Unpublished manuscript, Department of Psychology, Utrecht University

Schuler, R. S. (2000). The internationalization of human resource management. *Journal of International Management*, 6(3), 239-260.

Schuler, R. S., and Jackson, S. E. (1987). Linking competitive strategy with human resource management practices. *The Academy of Management Executive*, 1(3), 207–219.

Searle, B. J., and Parker, S. K. (2013). Work design and happiness: An active, reciprocal perspective. *Oxford Handbook of H*appiness, (pp. 711-732), OUP

Seibert, S. E., Silver, S. R., and Randolph, W. A. (2004). Taking empowerment to the next level: A multiple-level model of empowerment, performance, and satisfaction. *Academy of management Journal*, 47(3), 332-349.

Sergio, R. P., and Rylova, M. (2018). Employee engagement and empowerment as gateway towards retention: The case of Volkswagen group. *Journal of Eastern European and Central Asian Research*, *5*(2), 120-130.

Sheaffer, Z., and Mano-Negrin, R. (2003). Executives' orientations as indicators of crisis management policies and practices. *Journal of Management Studies*, 40(2), 573-606.

Sorenson, S. (2013). How employee engagement drives growth. *Gallup business journal*, 1(3), 1-4.

Spector, P. E. (1997). Job satisfaction: Application, assessment, causes, and consequences, Vol. 3, Sage Publications

Spreitzer, G. M. (1995). Psychological empowerment in the workplace: Dimensions, measurement, and validation. *Academy of management Journal,* 38(5), 1442-1465.

Spreitzer, G.M. (1995). Psychological empowerment in the workplace: Dimensions, measurement and validation. *Academy of Management Journal*, 38(5), 1442-1465.

Taneja, S., Pryor, M. G., Sewell, S., Recuero, A.M. (2014). Strategic Crisis Management: A Basis for Renewal and Crisis Prevention. *Journal of Management Policy and Practice,* 15(1), 78-85

Taneja, S., Pryor, M. G., Sewell, S., Recuero, A.M. (2014). Strategic Crisis Management: A Basis for Renewal and Crisis Prevention. *Journal of Management Policy and Practice*, 15(1), 78-85

Tehseen, S., Ramayah, T., and Sajilan, S. (2017). Testing and controlling for common method variance: A review of available methods. *Journal of Management Sciences,* 4(2), 142-168.

Towers Perrin Talent Report (2003). Working today: understanding what drives employee engagement, available at: www.towersperrin.com/hrservices/webcache/towers/United_States/publications/Reports/Talent_Report_2003/Talent_2003.pdf

Vardarlıer, P. (2016). Strategic approach to human resources management during crisis. *Procedia-Social and Behavioral Sciences*, 235, 463-472.

Venkatesh, V. (2020). Impacts of COVID-19: A research agenda to support people in their fight. *International journal of information management*, *55*, 102-197.

WHO (2020a), "Novel coronavirus (2019-nCoV) SITUATION REPORT – 11", Novel Coronavirus: World Health Organisation, World Health Organization, Geneva

Wolfe, M. T., and Patel, P. C. (2018). Satisfaction guaranteed? Life satisfaction, institutional factors, and self-employment. *Journal of Business Venturing Insights*, *9*, 45-52.

Wood, S., Nolte, S., Burridge, M., Rudloff, D., and Green, W. (2015). Dimensions and location of high-involvement management: fresh evidence from the UK Commission's 2011 Employer Skills Survey. *Human Resource Management Journal*, 25(2), 166-183.

Wright, P. M., Gardner, T. M., and Moynihan, L. M. (2003), The impact of HR practices on the performance of business units. *Human resource management journal*, *13*(3), 21-36.

Wright, P. M., Gardner, T. M., Moynihan, L. M., and Allen, M. R. (2005). The relationship between HR practices and firm performance: Examining causal order. *Personnel Psychology*, *58*(2), 409-446.

Wright, T. A. (2010). More than meets the eye: The role of employee well-being in organizational research. In P. A. Linley, S. Harrington, and N. Garcea (Eds.), *Oxford library of psychology. Oxford handbook of positive psychology and work* (p. 143–154). Oxford University Press.

Wright, T. A., and Cropanzano, R (2007). The happy/productive worker thesis revisited. In J. Martocchio (Ed.), *Research in personnel and human resource management* (Vol. 26, pp. 269—313). Amsterdam: Elsevier.

Yin, Y., Wang, Y., and Lu, Y. (2019). Why firms adopt empowerment practices and how such practices affect firm performance? A transaction cost-exchange perspective. *Human Resource Management Review,* 29(1), 111-124.

Annex 1 - Questionnaire in Portuguese

Investigação sobre o impacto das práticas de Recursos Humanos na capacidade de resposta a situações de crise nas empresas

Exmo(a). Sr(a).,

O meu nome é Gabriela Pereira e sou aluna da FEP (Faculdade de Economia da Universidade do Porto), onde frequento o 2º (e último) ano do Mestrado em Gestão.

No âmbito do meu trabalho final de curso, estou a desenvolver um estudo, cujo objetivo é aferir de que modo as práticas de gestão de Recursos Humanos contribuem para o desempenho dos trabalhadores e para a sua qualidade de vida, favorecendo as organizações em situações de crise.

Assim solicitamos que avalie cada uma das seguintes afirmações, tendo em conta o funcionamento da sua empresa durante a pandemia COVID19.

O preenchimento do questionário pode ser realizado por qualquer colaborador da empresa, e tem uma duração prevista entre 10 a 15 minutos. As respostas permanecerão anónimas e confidenciais, sendo somente usadas para fins de análise estatística.

Agradeço-lhe, desde já, pelo seu tempo e colaboração. Em caso de dúvidas em relação a alguma questão, não hesite em contactar: 91XXXXXXX

Melhores Cumprimentos,

Gabriela Pereira

Declaração de consentimento informado

Declaro que ao proceder ao preenchimento do questionário, autorizo que os dados resultantes do mesmo sejam usados para um estudo estatístico. Todas as informações são recolhidas de forma anónima e usadas apenas para esse fim.

Informações gerais sobre a organização

Neste ponto, pretende-se que indique alguns dados gerais acerca da organização onde desempenha funções, preenchendo, para tal, os campos que se encontram abaixo. Em caso de eventuais dúvidas p.f. contacte o autor da investigação sempre que necessitar

1) Indique a localização da sede da sua organização.	o Alentejo o Algarve o Área metropolitana de Lisboa o Área metropolitana do Porto o Centro o Norte o Região Autónoma da Madeira o Região Autónoma dos Açores
2) Indique o setor de atividade da sua organização.	o Energético o Indústria Alimentar o Indústria Automóvel o Indústria Metalúrgica o Indústria do Mobiliário o Indústria Têxtil e Vestuário o Obras públicas e construção Civil o Serviços

3) Indique o número de colaboradores da sua organização.	o 1 a 9 o 10 a 49 o 50 a 100 o 101 a 249 o 250 ou more	
4) Qual o seu grau de qualificação académica?	o Doutoramento o Mestrado o Licenciatura o Ensino secundário	
5) Há quanto tempo trabalha na sua organização?	o Até 1 ano o Mais de 1 ano até 3 anos o Mais de 3 anos até 5 anos o Mais de 5 anos até 10 anos o Mais de 10 anos	
6) Qual é o cargo que ocupa na sua organização?	Resposta aberta	

Secção 1

1) A minha empresa proporciona aos trabalhadores oportunidades de aprendizagem 2) A minha empresa tem políticas e programas de formação abrangendo várias áreas e competências, que se encontram disponíveis para os trabalhadores 3) Existem oportunidades de formação para os novos trabalhadores da empresa 4) A empresa fornece oportunidades para treinar a capacidade de resolução de problemas 5) A empresa partilha com os seus trabalhadores parte do lucro obtido nas suas operações	o 1 - Discordo fortemente o 2 o 3 o 4 o 5 o 6 o 7 - Concordo fortemente

6) Na minha empresa existe o pagamento de bónus aos trabalhadores 7) Na minha empresa, bons níveis de desempenho são recompensados? 8) Na minha empresa o desenvolvimento de competências é considerado algo importante, sendo devidamente valorizado. 9) A minha empresa avalia os seus trabalhadores considerando os resultados obtidos pela organização. 10) A minha empresa avalia os seus trabalhadores considerando os seus comportamentos. 11) A empresa é exigente/selectiva nos processos de recrutamento? 12) No processo de seleção, empresa valoriza as competências e qualificações dos candidatos 13) A empresa valoriza os candidatos que apresentem grande potencial 14) Os trabalhadores têm liberdade para tomar decisões sobre como realizar o seu trabalho 15) Os trabalhadores têm liberdade para fazer sugestões de melhoria 16) A opinião dos trabalhadores é valorizada pela empresa	

Secção 2

1) As pessoas no meu departamento são colaborativas 2) O ambiente profissional no meu departamento motiva-me a ter uma boa performance 3) Os processos de trabalho são claramente definidos 4) Os processos de trabalho ajudam-me a completar as minhas tarefas com sucesso 5) A minha empresa fornece-me os meios para obter conhecimento	o 1 - Discordo fortemente o 2 o 3 o 4 o 5 o 6

6) A minha empresa fornece-me os meios para partilhar conhecimento	7 - Concordo fortemente
7) Eu tenho equipamentos funcionais para desempenhar o meu trabalho	
8) Eu tenho os recursos necessários em termos de materiais de trabalho	
9) Eu compreendo em que direção que a empresa quer seguir	
10) As orientações que me fornecem permitem-me cumprir as minhas tarefas	
11) A minha empresa fornece meios para partilha de dados	
12) No contexto de trabalho, a partilha de dados ajudou-me a desempenhar tarefas operacionais da melhor maneira possível	
Secção 3	
1) No meu trabalho sinto-me cheio(a) de energia 2) No meu trabalho sinto-me com força e vigor 3) Quando me levanto de manhã tenho vontade de ir trabalhar 4) Estou entusiasmado(a) com o meu trabalho 5) O meu trabalho inspira-me 6) Estou orgulhoso(a) do que faço neste trabalho 7) Sinto-me feliz quando estou a trabalhar intensamente 8) Estou imerso(a) no meu trabalho 9) "Deixo-me ir" quando estou a trabalhar	o 1- Discordo fortemente o 2 o 3 o 4 o 5 o 6 o 7 - Concordo fortemente

Secção 4

1) O trabalho que eu faço é muito importante para mim
2) As minhas atividades de trabalho têm significado pessoal para mim
3) O trabalho que eu faço tem significado para mim
4) Eu estou confiante na minha habilidade para fazer o meu trabalho
5) Eu estou seguro/a sobre minhas capacidades para desempenhar as minhas atividades de trabalho
6) Eu domino as habilidades necessárias para o meu trabalho
7) Eu tenho autonomia para definir como faço o meu trabalho
8) Eu posso decidir como executar o meu trabalho
9) Eu tenho oportunidades consideráveis para ter independência e liberdade na maneira como faço o meu trabalho
10) As atividades que eu realizo impactam de uma forma significativa o meu departamento.
11) Eu tenho bastante controlo sobre o que ocorre no meu departamento
12) Eu tenho influência significativa sobre o que acontece no meu departamento

- o 1- Discordo fortemente
- o 2
- o 3
- o 4
- o 5
- o 6
- o 7 - Concordo fortemente

Secção 5

1) Em comparação com os seus colegas, como classifica a sua capacidade de adaptação a mudanças no modo de trabalho?

2) Em comparação com os seus colegas, como avalia a sua reação a situações de relativa emergência (como crises, prazos curtos, questões pessoais inesperadas, repartição dos recursos, problemas, etc.)?

3) Em comparação com os seus colegas, como avalia a qualidade da sua resposta a situações de relativa emergência?

4) Em comparação com os seus colegas, qual é o nível de eficiência do seu trabalho? Por outras palavras, até que ponto é que usa de forma adequada os recursos disponíveis (dinheiro, pessoas, equipamentos, etc.)?

5) Em comparação com os seus colegas, como avalia as suas capacidades de impedir ou minimizar potenciais problemas antes que eles ocorram?

6) Em comparação com os seus colegas, qual é a sua eficácia em adaptar-se às mudanças no trabalho?

7) Em comparação com os seus colegas, qual é a sua rapidez em adaptar-se às mudanças no trabalho?

8) Em comparação com os seus colegas, qual das seguintes opções melhor descreve a forma como a sua chefia o classificou na última avaliação formal de desempenho?

9) Em comparação com os níveis de produtividade dos seus colegas, como é que avalia o seu nível de produção, em quantidade?

o   1- Discordo fortemente
o   2
o   3
o   4
o   5
o   6
7 - Concordo fortemente

10) Em comparação com os seus colegas, como é que avalia a qualidade do seu trabalho?	
Secção 6	
1) Foram desenvolvidos planos/procedimentos para atuar em potenciais situações de crise 2) Estão definidas equipas para lidar com potenciais situações de crise 3) As equipas definidas para lidar com crises estão informadas sobre as suas tarefas e responsabilidades no caso de haver uma crise 4) A empresa tem uma base de dados com informação sobre potenciais situações de crise 5) Os colaboradores na minha empresa estão treinados para lidar com situações de crise 6) Os porta-voz para potenciais situações de crise estão definidos 7) Existem um manual detalhado relativo a gestão de crises 8) Se a minha empresa enfrentar uma crise, eu continuaria a receber o meu ordenado até a empresa reabrir 9) A minha empresa considera a preparação e gestão de crises como um dos objectivos prioritários 10) Se a minha empresa enfrentar uma crise, eu teria a informação necessária para realizar o meu trabalho armazenada remotamente 11) Na eventualidade de uma emergência, estou familiarizado/a com os procedimentos da minha empresa para continuar a operar a partir de outra localização 12) Se a minha empresa enfrentar uma crise, eu continuaria a ter o meu emprego	o 1- Discordo fortemente o 2 o 3 o 4 o 5 o 6 o 7 - Concordo fortemente

13) Se a minha empresa enfrentar uma crise, eu poderia perder o meu emprego	
14) Se a minha empresa enfrentar uma crise, eu continuaria a usufruir dos benefícios fornecidos aos trabalhadores	

Secção 7

1) De uma forma geral, a minha vida está próxima do meu ideal 2) As minhas condições de vida são excelentes 3) Eu estou satisfeito com a minha vida 4) Até agora, consegui aquilo que queria na vida 5) Se pudesse recomeçar, não mudaria quase nada na minha vida.	o 1- Discordo fortemente o 2 o 3 o 4 o 5 o 6 o 7 - Concordo fortemente

Annex 2: Table 5 – Variable constitution

Variable	Sub-variables	Items	Cronbach Alfa	Item-total correlation	KMO	Bartlett's Test
HRP (16 items)	Training	TRA1 TRA2 TRA3 TRA4	0.944	0.829 0.811 0.812 0.861	0.865	0.001
	Compensation	COM1 COM2 COM3	0.871	0.672 0.673 0.819	0.715	0.001
	Performance Appraisal	PRF1 PRF2 PRF3	0.920	0.884 0.812 0.844	0.760	0.001
	Staffing	STA1 STA2 STA3	0.920	0.800 0.778 0.833	0.750	0.001
	Participation	PAR1 PAR2 PAR3	0.904	0.720 0.822 0.837	0.726	0.001
ENB (12 items)	Supportive working environment	SWE1 SWE2	0.940	0.803 0.820	0.750	0.001
	Effective work processes	EWP1 EWP2	0.923	0.813 0.852	0.700	0.001
	Opportunity for learning and sharing	OLS1 OLS2	0.947	0.897 0.888	0.715	0.001
	Work equipment and supplies	WES1 WES2	0.966	0.868 0.874	0.750	0.001
	Clear direction	CLD1 CLD2	0.936	0.864 0.875	0.700	0.001
	Infrastrucutre for data sharing	IDS1 IDS2	0.950	0.880 0.856	0.710	0.001

ENG (9 items)	Vigor	VIG1 VIG2 VIG3	0.952	0.884 0.882 0.871	0.733	0.001
	Dedication	DED1 DED2 DED3	0.931	0.923 0.877 0.806	0.741	0.001
	Absortion	ABS1 ABS2 ABS3	0.905	0.817 0.778 0.723	0.745	0.001
EMP (12 items)	Meaning	MEN1 MEN2 MEN3	0.973	0.814 0.844 0.862	0,770	0.000
	Competence	CPT1 CPT2 CPT3	0.949	0.846 0.841 0.822	0.756	0.001
	Self-determination	SFD1 SFD2 SFD3	0.964	0.871 0.860 0.859	0.775	0.001
	Impact	IMP1 IMP2 IMP3	0.941	0.853 0.844 0.800	0.760	0.001
PERF (10 items)	Flexibility	FLX1 FKX2 FLX3	0.935	0.815 0.821 0.851	0.750	0.001
	Adaptability	ADP1 ADP2 ADP3 ADP4	0.926	0.832 0.783 0.855 0.857	0.779	0.001
	Productivity	PRO1 PRO2 PRO3	0.907	0.736 0.765 0.808	0.749	0.001
LSF (5 items)	N.A.	LSF1 LSF2 LSF3 LSF4 LSF5	0.941	0.792 0.842 0.844 0.880 0.848	0.893	0.000

Annex 3 – Paper

Crisis management and Human Resource practices
Bibliometric Analysis and Literature Review

Abstract

Purpose: The purpose of this study is to analyze how Human Resource Management practices (HRM) affect an organization's capability of Crisis Management (CRM). Specifically, it seeks to understand if companies with a higher focus on HR practices are better equipped to deal with a crisis and, therefore, were able to better manage the Covid-19 crisis.

Methodology: The Web of Science (WoS) search engine was chosen to retrieve recent literature related with Crisis Management and Human Resource practices as it offers a wide coverage and powerful analysis tools, compared to other search engines. The VOSviewer software was used to perform a keyword analysis and built a relations map.

Findings: The results of this paper suggest that the implementation of HRM practices is intrinsically related to the way in which companies manage crisis and maintain business continuity. The literatures points in the direction that companies with more integrative HRM practices and that recognize their importance when facing uncertainty were more capable to manage crisis in the past and work towards a faster recovery.

Implications/originality: The study of the references that arise in HRM and CRM articles has a vital role to explore and understand the origin of the scientific information acknowledged and used by the investigators in these areas. No bibliometric studies were found to access and quantify the intellectual framework of research in an integrated approach, the systematic review presented in this paper helps identifying empirical research and opens doors for future investigation.

Limitations: This paper used only one data base, WoS, and focused only on journals, disregarding different works. The bibliometric tools could be used conjointly with other data regarding the quality of a paper to better relevance assessment.

Keywords: Crisis, Crisis management, Covid-19, Human Resource practices

1. Introduction

Today, more than ever, companies are aware that crisis are periods when businesses are put to the test (Dayton, 2004). Being prepared to respond to crises is no longer just a convenient skill to have, it is a "must have" for organizations that commit to be sustainable and competitive in the short, medium and long term. In 2020, a health crisis without precedents in the past few decades spread through the world. The COVID-19 spread to every continent (WHO, 2020) and almost every country had to experience states of quarantine, or even lockdown (Clair, 2021). Since the beginning of the Covid-19 crisis, companies were forced to implement unexpected measures, such as layoff, reducing working hours and usage of remote working tools, which inevitably have a significant impact on employees' attitudes and behaviors and can affect their perception of role ambiguity and job security (Manuti et al, 2020). In the wide range of consequences resulting from the pandemic, challenges for change and improvement have also arisen. Matters that were previously undervalued became critical. Good management practices that were previously considered as a secondary approach, such as online work, have gain significant importance. A new organizational world arises from this disruption with learning opportunities for all parties involved, with the people in the center of this learning processes as they are vital to, in times of crisis and disruption, manage to keep companies working (Areiqat and Zamil, 2011; Alariki and Al-Abed, 2021; Harvey and Haines, 2005).

According to authors such as Hollingsworth et al. (2011), Bundy et al. (2017) and Park et al. (2013), unstable environments with major natural, humanitarian or economic system disruptions subject organizations to a significant level of business risk, as unforeseen

traumatic incidents can affect all aspects of business processes. The previous literature concerning organizational change and, more specifically, readiness for organizational change (Cunningham, 2002; Nizamidou and Vouzas, 2018; Lai and Wong, 2020), highlights the role of the employees' behaviors in the adaptation process. When firms are forced to change in order to survive in the organizational context, it is important to remember that people are a central part of the change process and can significantly facilitate the transition (many change implementation efforts fail because of misunderstandings of people-related issues), therefore there is an increased importance and need for HR professionals, managers and team leaders, to have a positive role by helping to increase readiness and reduce resistance to change (Maheshwari and Vohra, 2015). The literature increasingly challenges the investigation of HR practices that can help companies ensure business continuity in crisis situations (Herbane, 2010; Nizamidou and Vouzas, 2018; Vardarlıer, 2016). Therefore, companies need to have sustainable HR management practices in order to guarantee their sustainability in demanding contexts, which are more and more frequent. Previous authors support that natural hazards (e.g. Park et al., 2013) and economic crises (e.g. Katou, 2013; Gunnigle et al., 2013) among other situations of uncertainty, will have less negative impact on the livelihood of organizations if employees are intrinsically involved in the process of dealing with the crisis. It is expected that more supported, trained, recognized and motivated employees, who feel that organizations invest in them, might be more creative, resilient (Katou, 2017), autonomous and adaptable to demanding contexts and situations of instability (Cooke and Parry, 2020), ensuring that companies are able to endure and overcome, when competitors might experience difficulties (Sheaffer and Mano-Negrin, 2003).

Although some studies have been carried out in the past to analyze which HR practices may help to deal with crisis situations (Areiqat and Zamil, 2011; Nizamidou and Vouzas, 2018), until now, no study was done using bibliometric tools to analyze the knowledge available so far, considering the evolution of literature in the current pandemic context, in order to highlight the best practices that must be assured by companies to promote value creation

in demanding times. Thus, considering the usefulness of the bibliometric tools as a key resource to document knowledge and propose future paths for investigation (Du and Ke, 2017; Fontoura and Coelho, 2020), we propose to respond to the emerging need to analyze which HR practices can help to increase the organizations' response to crisis situations. The main objective of this study is to do a bibliometric study to understand the importance and direction of the literature that exists so far and identify the gaps that exist in the current research framework regarding the role of Human Resource practices in dealing with crisis in the organizational context, detecting investigation opportunities in this area. Chapter 1 introduces the investigation context, literature gaps, and investigation objectives and motivations. Chapter 2 presents a review of the main concepts approached in the conceptual model. Chapter 3 describes the methodology used in the study. The methodology consists in a bibliometric analysis carried out to complement the literature review with a systematic analysis using bibliometric tools in order to draw more accurate and freer of bias conclusions. The Web of Science (WoS) search engine was chosen to retrieve recent literature related with Crisis Management (CM) and Human Resource practices (HR practices), as it offers a wide coverage and powerful analysis tools, compared to other search engines. Following this step, the VOSviewer software, a program that uses the visualization of similarities (VOS) mapping technique, was used in order to visualize the recent research landscape considering CM and HR practices. Finally, Chapter 4 describes the results and Chapter 5 presents the discussion, contributions and limitations of this paper. Our final motivation is to help academics understand what areas of knowledge can be deepened to help companies better manage their people in order to face crisis situations and, at the same time, help managers to have additional arguments to implement best HR management practices in their companies, in order to guarantee business continuity in times of uncertainty.

2. Theoretical background

2.1 Human resource management

The interest on the notion of "best practices" on human resource management (HRM) increased considerably around the 2000's (Marchington and Grugulis, 2000; Gould-Williams, 2003). In the 1990s, research literature was highly focused on whether human resource management practices influence an organization's performance and, more specifically, employee performance, which can be defined as collective employee behaviors under their control that influence the achievement of a firm's goals (Jiang et al., 2012). A significant number of studies proposed that high quality HRM can be a source of competitive advantage for companies which the competitors cannot easily imitate (Patterson et al., 1997; Schuler & Jackson, 1987). An increasing amount of research arguments that the use of High-Performance Work Practices, such as comprehensive employee recruitment, incentive compensation and extensive employee involvement and training, can help improving the knowledge and abilities of current and potential employees, as well as increase their motivation and enhance retention of quality employees (Huselid, 1995). Several studies focused on analyzing the links between HRM and business performance, namely, the research of Patterson et al. (1997), which was putted forward as evidence for the importance of HRM as a driver of, and contributor to, improved performance. According to these authors, we can find a significant number of firms with very similar levels of competitiveness regarding ensuring high quality, updating production technology and investing in R&D. Contrarily, concerning the human resource management, there is a significant difference between organizations, with a few companies making a significant effort in comparison with their competitors. This perspective has been supported by more recent literature, considering for example, the positive organizational behavior (POB) perspective, which presents the subjective context that allows individuals to feel good at work, to have a better performance, and ultimately to create competitive advantage for companies (Cameron and Spreitzer, 2012). Furthermore, a number of studies

defend that supportive HRM systems can result in increased employee motivation and engagement, which in turn can have a significant impact on productivity and performance (Manuti et al, 2020; Wright et al, 2003; Wright et al, 2005).

Around 1990 there was also a growing curiosity about the notion of complementary "bundles" of HR practices. The impact on the company´s profits is more pronounced when these "bundles" are used together, regardless of the organization or industries (Marchington and Grugulis, 2000). Many writers have argued that it makes sense to assess systems of HRM practices rather than focus on individual practices. According to Huselid (1995), the largely theoretical literature supports that organizational HR practices can, if properly configured, directly contribute to the firm's performance, however, it is mainly focused on individual HRM practices and not on overall HRM systems. The author defends that a more effective system of HRM practices can be a source of sustained competitive advantage, once it not only exploits the potential for complementarities and synergies among such practices, but also helps to implement the company's competitive strategy. Hence, the logic behind the systems of HRM is that the performance of an organization will improve with systems of HRM practices when they are supporting each other and jointly reinforce employers' contributions to the organization's performance (Patterson et al., 1997). Accordingly, employee performance appears as an outcome directly linked with the degree of internal fit among HR practices that operate to influence employee abilities, motivation, and opportunities (AMO framework) (Jiang et al., 2012). In a similar perspective, Han et al. (2019) defend that the effectiveness of a HR system in supporting the strategic goals of a company depends on the degree to which it supports the employee's contributions required to achieve an organization's strategic goals. According to these authors, the effectiveness of a HR system in supporting organizational performance is related to 1) the degree to which the system comprises HR practices supportive of the employee behaviors aligned with a firms' strategic goals and 2) the degree to which the system supports desired employee behaviors with complementary and mutually supportive HR practices that guide towards the same goal.

Regarding the design of HR systems, several authors (Boxall & Purcell, 2008; Lepak et al., 2006, Jiang et al., 2012) suggest in their research to group HR policies, once all HR systems share a common composition in their basic format. Furthermore, we can see employee performance as a function of the three components of the AMO framework as the HR systems function by influencing the employees' abilities to perform, their motivation to perform and the opportunities to perform (Jiang et al., 2012). Similarly, Lepak et al. (2006), present a framework of the three primary HR policy domains to which the HR policies may be oriented to, in order to maximize employee contributions: (1) Knowledge, Skills, and Abilities; (2) Motivation and Effort; and (3) Opportunities to contribute (p. 238). Ultimately, HR systems aim to immediately and directly attain a desired employee performance, which theoretically has a direct impact in organizational performance (Jiang et al., 2012).

2.2 Crisis management and HR practices

In the last decades, several researchers tried to most suitably define "crisis". According to Fearn-Banks (1996), a crisis is "a major occurrence with a potentially negative outcome affecting an organization, company, or industry, as well as its publics, products, services, or good name" (p.6). An event like this can disrupt regular business operations and pose a threat to the company's perpetuation. Furthermore, a crisis can be a product failure, strike, a terrorist attack, a natural disaster or, in the most recent case, a worldwide pandemic. For Hamblin (1958) a crisis as "an urgent situation in which all group members face a common threat" (p. 322).

Lastly, Dayton (2004) stated that the "modern crisis does not recognize or respect national boarders; it thrives on fragmentation and variety…it does not confine itself to a particular policy area; it jumps from one field to another, unearthing issues and recombining them into unforeseen mega threats…the modern crisis is not boxed in by set dates that mark a clear beginning and ending; it is an embedded vulnerability that emerges, fades, mutates, and strikes again" (p. 166). This definition is particularly relevant as it highlights the extremely unpredictable character of a crisis and its wide range of impact.

Considering all the definitions cited above, it becomes clear why the role of managers is so challenging in such a situation. "Crisis Management" (CM) is a process of strategic planning for a crisis, which attempts to remove some of the risk and uncertainty from the negative occurrence and, therefore, can allow the organization to have more control over the situation (Fearn-Banks, 1996). CM can help diminishing the financial distress caused by an unexpected event and its purpose is to inform stakeholders of what threats exist and how to control a crisis (Alariki and Al-Abed, 2021). Pearson and Clair (1998) define CM concept as a "systematic attempt by organizational members with external stakeholders to avert crises or to effectively manage those that do occur". According to these authors, the criteria to access the effectiveness of these type of efforts should be based on analyzing if the operations were able to be sustained or resumed. This means that crisis management efforts were effective when the company "is able to maintain or regain the momentum of core activities necessary for transforming input to output at levels that satisfy the needs of key customer, organizational and external stakeholders' losses are minimized, and learning occurs so that lessons are transferred to future incidents." (Pearson and Clair, 1998, pp.60-61). According to Dayton (2004), crisis management includes the set of management practices concerning non-routine occurrences, but it also comprises the areas of prevention/preparation, and the complex process of recovery and adjustment that follows the crisis response. Alongside with this, the literature on this matter highlights another important concept, which is Crisis Communication. "Crisis Communication" is the dialog between the company and the public before, during and after the crisis happened. The approaches and strategies communicated are intended toward diminishing the possible harm caused to the company's reputation (Fearn-Banks, 1996).

Thus, organizations have to take into consideration some core problems to proceed with the strategic management of a crises: preparation, fast decision-making capabilities and the integration of crisis management and prevention on the company's strategy. The integration of crisis management within the strategic management of an organization is essential to help managers making informed and thorough decisions when they are

subjected to high levels of stress and uncertainty. The process of preparing a crisis can go from analyzing if the company possesses the required means to deal with an unpredictable event, to defining a crisis action plan involving the expertise of a crisis manager to oversee the situation and bringing a sense of normality to the company (Taneja et al., 2014).

Since the beginning of the Covid-19 crisis, companies were forced to implement unexpected measures, such as layoff, reducing working hours and usage of remote working tools, which inevitably have a significant impact on employees' attitudes and behaviors and can affect their perception of role ambiguity and job security (Manuti et al, 2020). A positive management of change depends on the relationship between employees' perception of HRM practices and their coping behaviors, as it is through employees' attitudes that organizations are able to realize a proposed transformation and successfully maintaining it over time (Manuti et al, 2020). For example, Cunningham (2002) defends that employees that have the ability to cope with change present higher readiness for change scores, which results in a more active participation in redesign activities and awareness of the personal contribution to the whole process. Therefore, when an employee feels the organization's support during change processes, he/she will tend to maintain a positive relationship with it and to adopt coping behaviors with change himself/herself (Manuti et al, 2020).

3. Methodology

3.1 Data Source and Search Strategy

The methodology consists in a bibliometric analysis carried out to complement the literature review with a systematic analysis using bibliometric tools in order to draw more accurate and freer of bias conclusions. This approach was chosen once a systematic review is a replicable overview of research on a certain topic which allows the identification, selection and synthesis of all high-quality research evidence pertinent to the considered topic. Furthermore, applying bibliometric methods has become a more common practice once it is easier to use compared to, for example, content analysis; facilitates the in-depth

analysis of the relationships between publications, citations, and key words and provides the means to analyze the information in an illustrative way which facilitates its interpretation (Fontoura, 2020). The Web of Science (WoS) search engine was chosen to retrieve recent literature related with Crisis Management (CRM) and Human Resource Management practices (HRM), as it offers a wide coverage and powerful analysis tools, compared to other search engines. WoS offers a citation analysis that provides better graphics and is more detailed than the citation analysis other search engines, as WoS has been designed with the intent to satisfy users in citation analysis, a field discussed and debated by scientists for decades (Analytics, C.,2017. Furthermore, WoS defines as one of its strengths the selection process for only including certain journals in its content coverage, defending that the majority of important scientific findings are reported in only a small number of journals, thus emphasizing quality of its content coverage rather than the quantity (Kulkarni et al., 2009). WoS was accessed on beginning of 2021 and, since this study is interested in global research activity considering the consequences for management due to the COVID-19, the following search approach was employed: in an "advanced search" topic ("human resource practices" OR "Hr practices" OR "people management practices" OR "human capital practices" OR "Human resource management" OR "best HR practices" OR "human resources practices" OR "Human resources management"), document type (article OR review), time span (1990-2020), language (all). Subsequently, the same research parameters were used for the topic ("crisis" OR "covid" OR "covid-19" OR "Coronavirus" OR "pandemic" OR "business continuity" or "disaster" or "catastrophe" OR "risk" OR "crises management" OR "organizational crisis"). Then, the WoS option of combining two sets of documents was used in order to find the ones that address both topics. The identified articles, with the corresponding titles, keywords, author information, abstracts and references, were stored in a TXT format.

3.2 Data Analyses and Presentation

The next step consisted in using the information obtained from WoS concerning the included articles, on the VOSviewer software, in order to visualize the recent research landscape considering CRM and HRM practices. VOSviewer is a program that uses the visualization of similarities (VOS) mapping technique. It is a valuable tool for constructing and visualizing bibliometric networks (VOSviwer, 2020). The VOSviewer network visualization option presents concepts considering their relevance. The most important concepts are the one with the largest labels on the circles. Each circle has a color which indicates the cluster it belongs to. For each term that met the threshold, a relevance score was calculated and based on this score, the most relevant terms were selected. In the present study, co-occurrence of keywords was analyzed using networking maps, based on the title and abstract fields.

4. Results

4.1 Evolution and Data Analysis

The results presented in this section came from analyzing the evolution of the number of articles and the respective number of citations per year, between 1990 to 2020. By crossing the results obtained from each set for key words, a total of 597 documents was obtained. Considering the WoS categories, of these 597 articles, 275 belong to the Management category, 84 to Business, 41 to Economics and 89 to Industrial Relations Labor. The remained belong to several different categories, from Psychology to Public Administration. This search engine not only provided the number of publications per year, but also presented a report that reflects citations to source items indexed within the Web of Science Core Collection. Figure 1 shows the annual number of publications and citations considering the two topics in analyses. The first publications report back to the 1990s and then started

period of growth after 2001 and reaching a pick in 2020, the last year considered in the analyses.
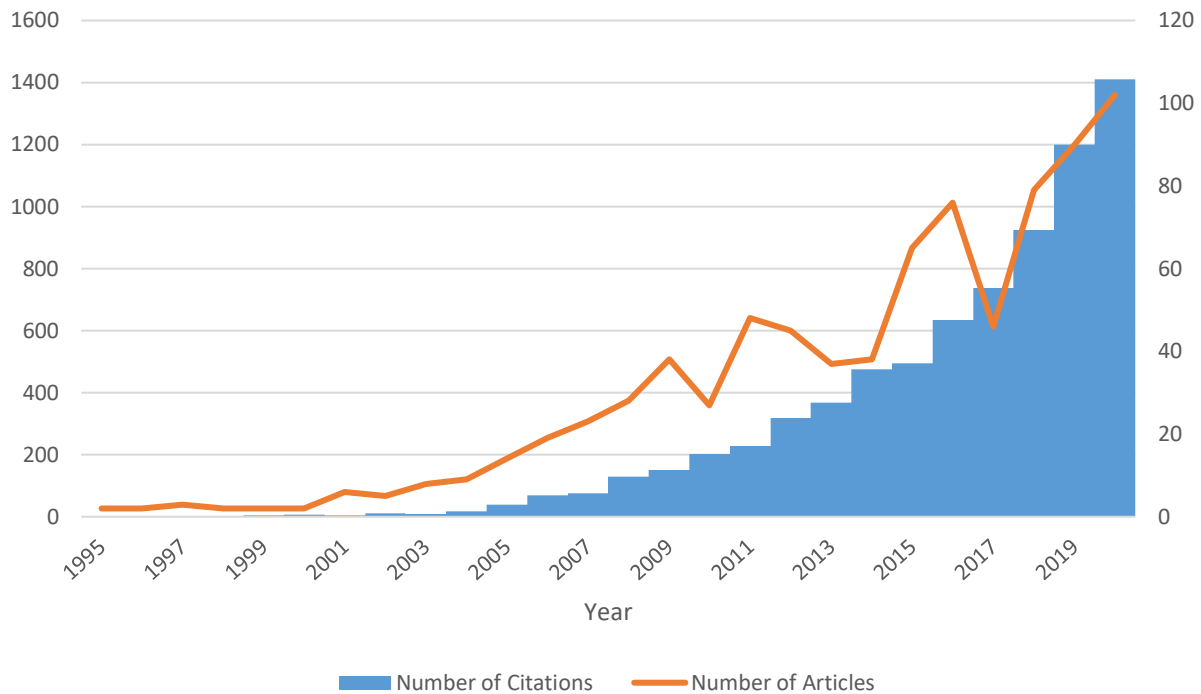
Figure 2 - Evolution of Publications and Citations

Table 1 organizes the fraction of publications and citations for each chosen field and according to the search sample outcomes, considering fields of study related with the purpose of present investigation, namely management, business and economics. The keywords presented on the table are merely indicative of the category as at the time of the research, several keywords were used to filtrate the articles for each set, as described in point 3.1. Moreover, due to the extremely high number of articles that resulted from the CRM set, further categorical filters had to be applied in order to obtain a number equal or smaller than 10,000 as this is the maximum limit that the WoS imposes in order to obtain a citation report. The total number of citations is the total number of citations to all items in the results set.

Keywords	Number of Articles	Number of Citations
"Human Resource Management Practices"	8,393	269 038
"Crisis Management"	9,374	42 280
Interception of the keywords sets	597	7,767

Table 3 - General research data of number of articles and citations

Thus, a total of 8,393 articles were found to approach HRMP and 9, 374 to focus on CRM. A much smaller number of articles is considered after intercepting both keywords sets, with a total of 597 articles and 7,767 citations.

The next step of the analysis consisted in resourcing to the VOSviewer software. After uploading the TXT files obtained from WoS and selecting the "full counting" technique and a minimum of 4 occurrences per word, 770 terms were categorized as the most relevant. To select the most relevant concepts, the software calculated a relevance score for each of the 770 terms. The default choice is to select the 60% most relevant terms. With is, it is possible to analyze and identify the areas with higher cluster density. Figure 2 shows that the areas with higher density of study regarding these subjects are focused on global financial crisis, economic crisis and organizational performance. Regarding the more dispersed fields, we can see words such as "human factor", "profit", "financial resource" and "organizational behavior".
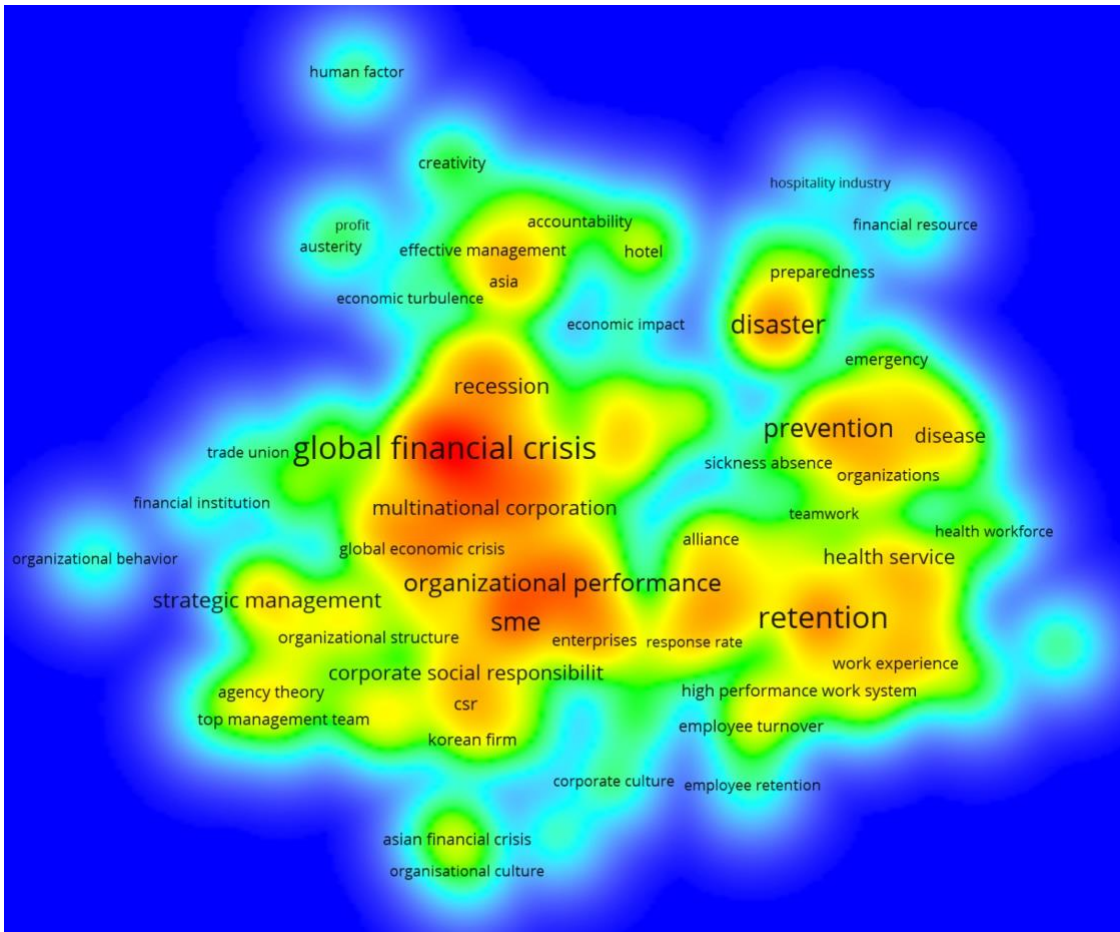
Figure 2 - Density of the most relevant areas of study concerning HRM and CRM

4.2 Publications and Intellectual Knowledge

After obtaining the sample of articles in 4.1, we decided to proceed with its characterization. Table 2 presents a ranking of the top 20 most cited authors. According to this table, Froese, F.J. is the most cited author considering the studies crossing HRM and CRM in the fields of management, business and economics. However, this analysis shows that the authors taken into account have relatively low numbers of citations and documents, which suggests a need for more research to be done in this field of study.

Ranking	Author	Citations	Documents
1	Froese, F.J.	21	3
2	Dundon, T.	17	1
3	Malik, A.	17	4
4	Kim, S.	15	1
5	Wang, J.	15	1
6	Cooke, F.L.	14	3
7	Cho, J.	13	3
8	Wilkinson, A.	13	2
9	Amankwah-Amoah, J.	12	1
10	Budhwar, P.	12	1
11	De Cieri, H.	12	3
12	Decramer, A.	12	1
13	Rowley, C.	12	3
14	Wood, G.	12	3
15	Zaman, U.	12	1
16	De Clercq, D.	11	1
17	Lee, J.	11	1
18	Warner, M.	11	3
19	Bartram, T.	10	5
20	Sanders, K.	10	1

Table 2 - Top 20 most cited authors for HRM and CRM keywords

Furthermore, we summarized the top 20 countries that produce articles on this field in Table 3. The United States are the clear leader in citations and publications regarding HRM and CRM, followed by England, China, Australia and Spain. This illustrates that the research on this subject is not concentrated in a specific region or continent, which can be justified with the fact that this is a matter of global interest that benefits from considering different perspectives and approaches on the role that HRM can have in CRM. Some countries are more prompt to certain types of crisis than others (the likelihood of having an economic

crisis or a natural hazard is not uniform) and combining and comparing different responses to various crisis situations can help building a set of more comprehensive knowledge regarding this field of study.

Ranking	Country	Citations	Documents
1	USA	1,476	111
2	England	971	90
3	China	665	41
4	Australia	619	61
5	Spain	439	36
6	Germany	367	28
7	Canada	364	29
8	Netherlands	269	17
9	Italy	250	17
10	France	246	13
11	South Korea	190	25
12	Sweden	188	6
13	India	181	17
14	Malaysia	153	10
15	Taiwan	144	17
16	Denmark	131	4
17	Pakistan	129	6
18	Norway	128	6
19	Belgium	126	13
20	Turkey	122	8

Table 3 - Top 20 countries with more citations on HRM and CRM

Thirdly, we analyzed the scientific journals regarding their publications and citations in the same area of study. The International Journal of Human Resource Management leads the

number of citations and documents and it is a British journal, which is in accordance with the previous table that shows England in the second place of countries with more citations and documents. England has one more journal in the top 5, the Employee Relations, and the only non-European journal in this top 5 is the Human Resource Management, from the United Sates.

Ranking	Source	Citations	Documents
1	International Journal of Human Resource Management	245	51
2	Sustainability	124	8
3	Safety Science	83	2
4	Employee Relations	78	11
5	Human Resource Management	76	11
6	Personnel Review	73	15
7	Human Resource Management Journal	72	10
8	Journal of Business Ethics	62	5
9	Journal of Business Research	62	5
10	International Journal of Environmental Research and Public Health	54	2
11	International Journal of Project Management	48	4
12	International Journal of Hospitality Management	38	1
13	Human Resources for Health	37	9
14	Asia Pacific Journal of Human Resources	34	4
15	Human Resource Management Review	34	6
16	Journal of Cleaner Production	33	3
17	Journal of Management	33	1
18	Asia Pacific Business Review	31	7
19	Corporate Social Responsibility and Environmental Management	31	1
20	International Journal of Contemporary Hospitality Management	31	4

Table 4 - Top 20 journals with more citations on HRM and CRM

Considering now a more deepen analyses, Table 5 summarizes the most relevant scientific publications identified by the interception of the considered keywords sets, regarding the fields of management, business and economics. Some of these studies are very recent and were published in the same year as this investigation was performed and therefore, present very low citation numbers. However, their content appears to be very relevant, with pertinent suggestions for future research.

Author/ Journal	Title	Citation	Relation between HRM and CRM	Identified gaps	Suggestions for future investigation
Zhu, Y., Warner, M., & Rowley, C. (2007); *The International Journal of Human Resource Management*	"Human resource management with 'Asian' characteristics: a hybrid people management system in East Asia"	96	The authors analyzed the information on the changes of HR systems, factors causing the changes and the timing, and found that the common phenomenon is that when there is a crisis, there may be some opportunities for drastic changes. They concluded that HRM is a reforming process towards hybrid people-management system in the East Asia and that there is a triangle-influence between East Asia, Europe and the US.	This paper is focused on the similarities and differences of people-management systems among economies in East Asia and also examine other elements that were being adopted into the existing systems due to the influence of the US and Europe. Therefore, the authors tackled the confusion that existed among many researchers regarding which elements of HRM belong to the East Asian tradition and which elements are adopted from the West.	The authors suggest doing similar studies in different economies worldwide.
Gunnigle, P., Lavelle, J., & Monaghan, S. (2013); *International Journal of Manpower*	"Weathering the storm? Multinational companies and human resource management through the global financial crisis"	63	These authors found evidence indicating that multinational companies have been in the vanguard of companies engaging in multidimensional restructuring programs in response to the global financial crisis, incorporating many initiatives in the domain of HRM.	These authors focused their investigation on the recent global financial crisis and its effects on one of the more globalized economies in the world, Ireland.	For future investigation, the authors suggest studying how the multinational companies managed the delivery of changes in HR practices that resulted from the global financial crisis, specifically, the matter of communications about the impact of this crisis (with employees, employee representatives, etc.), its consequences for trade unions and the influence of HR changes shaped by the global financial crisis on the bottom line.

Sheaffer, Z., & Mano-Negrin, R. (2003); *Journal of Management Studies*	"Executives' Orientations as Indicators of Crisis Management Policies and Practices"	53	This study concludes that awareness of the preparedness for crises requires systemic corporate thinking. The results show that firms with high scores in all four critical corporate dimensions (HRM, structure, strategic and unlearning) are better equipped to deal with organizational downturns, once these firms also have high scores on crisis preparedness.	The authors followed several indications regarding the lacuna in empirical testing of speculations and theoretical treatises involving CM and tested a fundamental crisis niche in management related studies by focusing on managerial orientations as antecedents to or predictors of crisis.	The authors suggest further literature to assess the lack of causal interaction by measuring the variables in several points in time to account for temporal internal dynamics. Also, they suggest future researchers to have more rigorous selection criteria when selecting the firms for the sample. Additionally, investigators could extent the scope into multiculturalism in order to help understanding international differences with respect to crisis proneness or preparedness.
Lai, Y., Saridakis, G., Blackburn, R., & Johnstone, S. (2016); *Journal of Business Venturing*	"Are the HR responses of small firms different from large firms in times of recession?"	49	The authors found that SMEs are more vulnerable during times of recession than larger firms, but those with HR practices had more resilience to the downturn. Also, management formality was found to moderate the differences in workers' job experience during the recession.	The authors explored the gap that existed in exploring the relationship between firm size and strategic responses during adverse macro-economic conditions. Furthermore, the previous literature relied on data collected from owners and managers with little or no attention paid to the experiences of employees.	For future research, the authors point out that their study reinforced the need investigating the intersection of HRM and entrepreneurship to help develop the understanding of business challenges, management responses, and employee responses in smaller firms. Also, this study suggests using a multidimensional approach to the concept of size, instead of using the number of employees as a proxy for firm size. Finally, the authors suggest testing if the conclusion that smaller firms are more sensitive to external shocks and more affected by recessionary conditions than larger firms is still valid for small businesses during an economic boom.

Ordiz-Fuertes, M., and Fernández-Sánchez, E. (2003); *International Journal of Human Resource Management*	"High-involvement practices in human resource management: concept and factors that motivate their adoption"	45	These authors concluded there is a relationship of interdependence between management style, environmental dynamism and HR practices. That is, when companies are inserted in a dynamic context, they are more likely to adopt high-involvement work practices.	This paper aimed to contribute to the growing body of literature regarding the concept of "best practices" in human resources by testing hypotheses concerning the influence of adopting high-involvement work practices in Spanish firms.	The authors recognize the difficulty of establishing causal relationships between the dependent variable and the independent variables and challenge testing causality with data collected at different points of time. Furthermore, future research could rely on more objective measures – countable, stock-market, financial results rather than the qualitative measures based on self-reported questionaries and also collect data from different sources.
Katou, Anastasia A. (2017); *International Journal of Productivity and Performance Management*	"How does human resource management influence organizational performance? An integrative approach-based analysis"	43	This study compared the notions of HRM content and HRM process and concluded that the first is more positively related to job satisfaction and motivation and less related to organizational commitment than the second.	This author argued that although studies analyzing the relationship between HRM systems and organizational performance were increasing, there was a lack of empirical studies measuring the impact of HRM systems on organizational performance considering that HRM systems integrate both content and process of HR practices.	The author suggest that further research could rely on longitudinal data and this study only used data collect with a questionnaire at a single point in time, which does not allow for dynamic causal inferences. Also, the sample's size was rather small and future research should seek to use larger sample sizes and consider including other countries besides Greece that were suffering similar financial crises.

Carnevale, J. B., and Hatak, I. (2020); *Journal of Business Research*	"Employee adjustment and well-being in the era of COVID-19: Implications for human resource management"	34	This study is focused on the implications COVID-19 has for HRM and how organizations help their workforce cope with and adjust to their newly altered work.	This paper identified the gap arising with the recent COVID-19 pandemic and the challenges that appeared across many areas of operations.	These authors offer several paths for future research. First, considering the drastic changes in the work conditions, they suggest investigating the daily impact and recovery experienced when engaging in virtual social activities with colleagues as a replacement for face-to-face social gatherings. Secondly, considering the work-life balance, this paper highlights the importance of studding these new and dynamic work environments and how the work-balance was affected. Thirdly, there a suggestion to explore the role of job design in facilitating employees' entrepreneurial qualities to respond to drastic change events.
Becker, K., & Smidt, M. (2016); *Human Resource Management Review*	"A risk perspective on human resource management: A review and directions for future research"	28	Besides arguing the value of effective HRM practice, it is also important to identify the risks presented by inappropriate or absent HRM practices. HR related risks are not as prominent as other types of risks in the literature and HRM is important when addressing this situation and raising awareness of HR issues as risks for the organization.	This paper aimed to analyze to which extent the management literature since the year 2000 approaches the topic of human resources and HRM practices that adopt a risk perspective. By reviewing empirical and theoretical articles, the authors identified the ones that recognize HR as a source of risk and/or HRM as a way to mitigate organizational risk.	This paper includes a table containing several directions for future research to develop HRM and risk management as a phenomenon. For example, investigating HRM related risks at a macro or systemic level, explore a variety of data to further understand human resource related risks and their manifestation and identify how human resource risks link to existing risk management frameworks. The authors also highlight the need for robust frameworks and models to use for human resource risk management.

Caligiuri, P., De Cieri, H., Minbaeva, D., Verbeke, A., and Zimmermann, A. (2020); *Journal of International Business Studies*	"International HRM insights for navigating the COVID-19 pandemic: Implications for future research and practice"	22	The authors focused their study on international business research and on international HRM to address Covid-29 challenges and help guiding managers as they struggle with difficult choices. They outlined that, while financial crisis in 2007 highlighted the role of talented Chief Financial Officers the COVID-19 pandemic is highlighting the role of Chief Human Resource Officers.	Through their literature review, the authors gathered a body of knowledge in IHRM to help understanding the challenges people face when facing several MNE work arrangements, such as virtual international work and frequent international travel. The goal of this paper it to identify key themes and opportunities for 'quick wins' that could be immediately applied in MNE managerial practice, which is particularly useful for HR managers today while they face new challenges during the Covid-19.	The authors' suggestions for further literature in IHRM aimed to fill in the broader gaps in the IB literature. Specifically, they made suggestions for research on how to manage global uncertainty (namely, in the fields of leadership and talent management, collaborating under stress, and managing health and safety), how to facilitate global work (namely in the fields of global teams and virtual collaboration and international assignments) and on how to redefine organizational performance (rising questions such as "what matters most at the time of a pandemic, and how can IHRM contribute to it?" "Which bundles of IHRM practices have enabled effective organizational adaptation and prioritization, and which ones have caused organizational failure to respond?")
Marchington, M., & Kynighou, A. (2012); *The International Journal of Human Resource Management*	"The dynamics of employee involvement and participation during turbulent times"	22	Given that the global financial crisis had an impact on patterns of HRM, it is likely that it also shaped employee involvement and participation. This study concluded that in coordinated market economies, where employee involvement and participation is more deeply embedded into the institutional structure of the country, employers are more likely to continue involving their staff in some way to deal with crisis.	Given the shocks caused by the global financial crisis of 2007, and the shift to less stable economic and employment conditions, the literature sought to analyze the impact on employee involvement and participation. However, there were opposite opinions regarding the crisis effects on this matter, and so these authors purposed to examine the dynamics of EIP at the organizational level as it is	Once the development of employee involvement and participation is limited by the context (organizations were not affected equally by the crisis and variations occur in conceptual perspectives, business models and the value and importance of workers to the organization), further research could take this under consideration and explore different contexts.

				where the crisis was felt most deeply, with employers responding to severe market pressures and externally imposed cost reductions.	
Kamoche, K. (2003); *International Journal of Human Resource Management*	"Riding the typhoon: the HR response to the economic crisis in Hong Kong"	22	It was expected that the turbulent context in Hong Kong at the time would drive managers closer to a managerial approach that relies less on established operational structures and more on a finer balance between structure and flexibility, however, there are several obstacles resulting from entrenched cultural practices and leadership styles that reinforce the elements of 'structure' more than they permit the emergence of 'flexibility'.	Although there was a lot of research done on the financial, economic and social ramifications of the 1997 Asian crisis, the author found a gap regarding the HR ramifications of the form of turbulence experienced in the hotel industry in Hong Kong.	For further research, the author suggests examining if practices like training have an impact on self-confidence and on subordinates' inclination to exercise discretion, particularly in turbulent times. There is also the suggestion to explore the accomplishment of the structure/flexibility balance in other industries and in non-turbulent contexts where the challenges may be very different from the ones experienced in the hotel industry.
Zagelmeyer, S., and Gollan, P. J. (2012); *The International Journal of Human Resource Management*	"Exploring terra incognita: preliminary reflections on the impact of the global financial crisis upon human resource management"	18	This paper concludes that the global financial crisis severely impacted markets and organizations, as well as on the people in these institutions. It found that the markets and organizations didn't appear to be capable of reconfiguration in order to tackle the challenges.	These authors focused their work on the external shock wave that affected HRM coming from the global financial crisis, which altered the parameters within which HR professionals were operating. This paper contributed to the literature by discussing developments in the ways in which the global financial crisis altered HRM.	For future research, the authors suggest considering the social context in which markets and organizations are included, as it shapes the values and assumptions of the people within that system, as well as formal and informal norms and interconnections among players.

Jun, W., and Rowley, C. (2014); *Business History*	"Change and continuity in management systems and corporate performance: Human resource management, corporate culture, risk management and corporate strategy in South Korea"	12	This paper empirically analyzed changes in the HRM, corporate culture, risk management and competitive strategy parts of management systems in the General Trading Companies (GTC) of South Korea in terms of internal perceptions of impact on corporate performance (in light of the 1997 Asian Crisis). The findings support that GTCs' emphasis on HRM after the financial crisis positively impacted corporate performance.	These authors focused their paper on the gap that existed regarding studies on Korean businesses, particularly concerning GTC, as previous studies were focused on historical quantitative growth, rather than approaching GTCs from an organizational change perspective. Also, there was a lack of research providing integrated insights by examining different areas of change together.	The authors challenge future investigators to direct a survey to senior management instead of manager-level staff. Furthermore, they suggest adding longitudinal dimensions and use various data sources on corporate performance.
Lai, I. K. W., and Wong, J. W. C. (2020); *International Journal of Contemporary Hospitality Management*	"Comparing crisis management practices in the hotel industry between initial and pandemic stages of COVID-19"	11	These authors defend that, priority strategies should be applied in all epidemic prevention, keeping in mind the human resources practices, as hotels tended to force labor into unpaid vacations and postpone office and system maintenance.	This paper refers that very few studies focused on the hotel industry, especially on how to cope with an epidemic crisis and hotel industry stakeholders require executive strategies for crisis management practices in response to pandemics. Furthermore, another gap was found as previous studies in CM practices only focused on a single point in time and research on epidemic crises was conducted in the post-crisis stage.	For further research, the authors suggest doing studies during the recovery stage to complete the research of the COVID-19 crisis cycle. Also, further studies are needed to see if the changes in strategies described here lead to superior outcomes or a higher rate of recovery in Macau than elsewhere. Lastly, a suggestion is made to test the use of importance-usage-performance analysis in other tourist destinations other than China.

| Gannon, J., and Paraskevas, A. (2019); *The International Journal of Human Resource Management* | "In the line of fire: managing expatriates in hostile environments" | 6 | This paper studied the best practices used by Multinational corporations in preparation and protection of strategic HR in hostile environments. The authors identify the challenges Multinational Corporations face to protect their HR and highlight the importance of specialist expertise, knowledge, and management. | After a literature review, the authors identified a gap related to corporate HR executives' views on the specific risks their employees face in adverse situations and the support and measures necessary for international managers to operate in such hostile scenarios. | This paper suggests future investigators to study the relations developed between corporate HR and risk and security executives and the external expertise they value in safely managing their companies' strategic HR. Also, the authors suggest analyzing the implications of talent spotting and management for precise locations in the world to comply with the corporate risk agenda. Moreover, there is the need to investigate how companies may support and evaluate their practices regarding the support of managers before and after a crisis. |
| Sitalaksmi, S., and Zhu, Y. (2010); *Asia Pacific Business Review* | "The transformation of human resource management in Indonesian state-owned enterprises since the Asian Crisis" | 5 | This study found that the transformation of state-owned enterprises (SOEs) was determined by the firms' relationships with both their internal and external stakeholders. Following the Asian Crisis, Indonesia witnesses a drastic change of the HR practices toward greater market orientation and the pervasiveness of 'best practice'. | According to the authors, at the time this study was made there was a gap of in-depth research of SOEs with Asian Crisis as the backdrop, which they believed was essential, as unprecedented dynamics and contestation among the strategic actors, namely the state, the management, and the enterprise union, could be unveiled and the firms' transformation effort could be better understood. | The authors suggest analyzing how the SOEs evolver in the following year and what changes the society went through due to the effect of the crisis. |

Sanders, K., Nguyen, P. T., Bouckenooghe, D., Rafferty, A., and Schwarz, G. (2020); *The Journal of Applied Behavioral Science*	"Unraveling the What and How of Organizational Communication to Employees During COVID-19 Pandemic: Adopting an Attributional Lens"	4	These authors found that Corporate Social Responsibility (CSR) policies in response to COVID-19 are implemented by individual employees, despite being created by the organization, as the way employees perceive and react to CSR actions determines CSR's implementation and success.	According to this paper, the research on CSR research was focused mainly on why and when firms choose to engage in CSR (institutional approach). From the authors' perspective, a behavioral approach to CSR simplifies, through an employee-centric conceptual framework, a deeper understanding of when and why employee reactions lead to positive and unintended negative outcomes, especially during the COVID-19 pandemic.	For future research, the authors provide several paths of investigation divided in seven categories, namely, "HR practices", "Bridging the micro-macro divide", "Measuring CSR's impact on stakeholders outside the firm"," Effects of CSR programs in reaction to COVID-19"," Indicators of employee resistance to CSR"," Hybrid public–private collaborations", and" Social inclusiveness, inequity and vulnerable populations".
Cooke, F. L., Dickmann, M., and Parry, E. (2020); *The International Journal of Human Resource Management*	"IJHRM after 30 years: taking stock in times of COVID-19 and looking towards the future of HR research"	2	Resourcing to the analysis of the publication trends indicated by keywords, this paper found that research published in the International Journal of Human Resource Management shifted from a collective focus with institutional implications towards more individual concerns with organizational repercussions with relevance to HRM practices.	These authors believe that the Covid-19 is capable of considerably changing the international HR practices and the general world of work. In that sense, this paper analyzes what the content of the International Journal of Human Resource Management in order to see in what direction the previous literature followed and offers suggestions of important issues for future research beyond the current trajectory of HRM studies.	For future research, the authors suggest exploring the role of religiosity and spirituality, and the interactions of stakeholders, in facilitating employees to develop resources needed to support them through hard times and develop a positive mentality (the role of external stakeholders such as religious organizations and local communities may be central in maintaining and developing employees' resilience and well-being).

Susilo, D. (2020); *Journal of Contemporary Issues in Business and Government*	"Revealing the Effect of Work-From-Home on Job Performance during the Covid-19 Crisis: Empirical Evidence from Indonesia"	1	This paper concluded that the work-from-home practice led to employees feeling more enjoyment, satisfaction and motivation, which enhanced job performance in Indonesia.	This author identified the gap that exists in the literature regarding if the effect of work-from-home on job on employee performance is negative or positive and explored it in light of the conditions created by Covid-19.	Once this author was only focused on Indonesia and did not account for control variables, he suggests future research to investigate how differences in age, culture, education, income and industry may affect the job performance of people who work from home. Also, further studies can collect data from other countries to widen the scope of research.
He, J., Mao, Y., Morrison, A. M., and Coca-Stefaniak, J. A. (2020); *International Journal of Contemporary Hospitality Management*	"On being warm and friendly: the effect of socially responsible human resource management on employee fears of the threats of COVID-19"	1	This paper found that socially-responsible human resource management (SRHRM) negatively impacts employee fears of external threats, once it enhances trust in the organizations. Additionally, the strength of the COVID-19 pandemic positively moderated the effect of SRHRM on employee fears.	According to these authors, the focus of the majority of previous studies focused on the relationship between SRHRM and employee behaviors under normal operational conditions, thus the impact of SRHRM on employee attitudes need greater and more in-depth exploration as the effects of SRHRM practices during COVID-19 could differ from HRM under normal circumstances.	For further research, this paper suggests doing a longitudinal research to explore the causality relationship between SRHRM and fears of external threats. Furthermore, future investigations could gather data from multiple sources (both managers and employees) and develop multilevel research studies on SRHRM and individual outcomes. Also, the conceptual model used in this paper should be tested in industries other than hospitality and tourism. Finally, the effects of SRHRM on positive psychological outcomes could also be studied, as well as an expanded conceptual model to test the interaction effects of leadership and SRHRM practices to consider the impacts of the organizational context.

Table 5 - General research data of the most relevant articles regarding HRM and CRM and number of citations

Finally, the process described in 4.1 using VOSviewer allows a more visual analysis of the sample. Through Figure 3, it is possible to distinguish six major clusters. The first cluster contains 25 items, the second 24 items, the third contains 22, the fourth presents 21, the fifth has 19 items and the sixth comprises 17. Table 5 presents with more detail the main elements of each cluster.
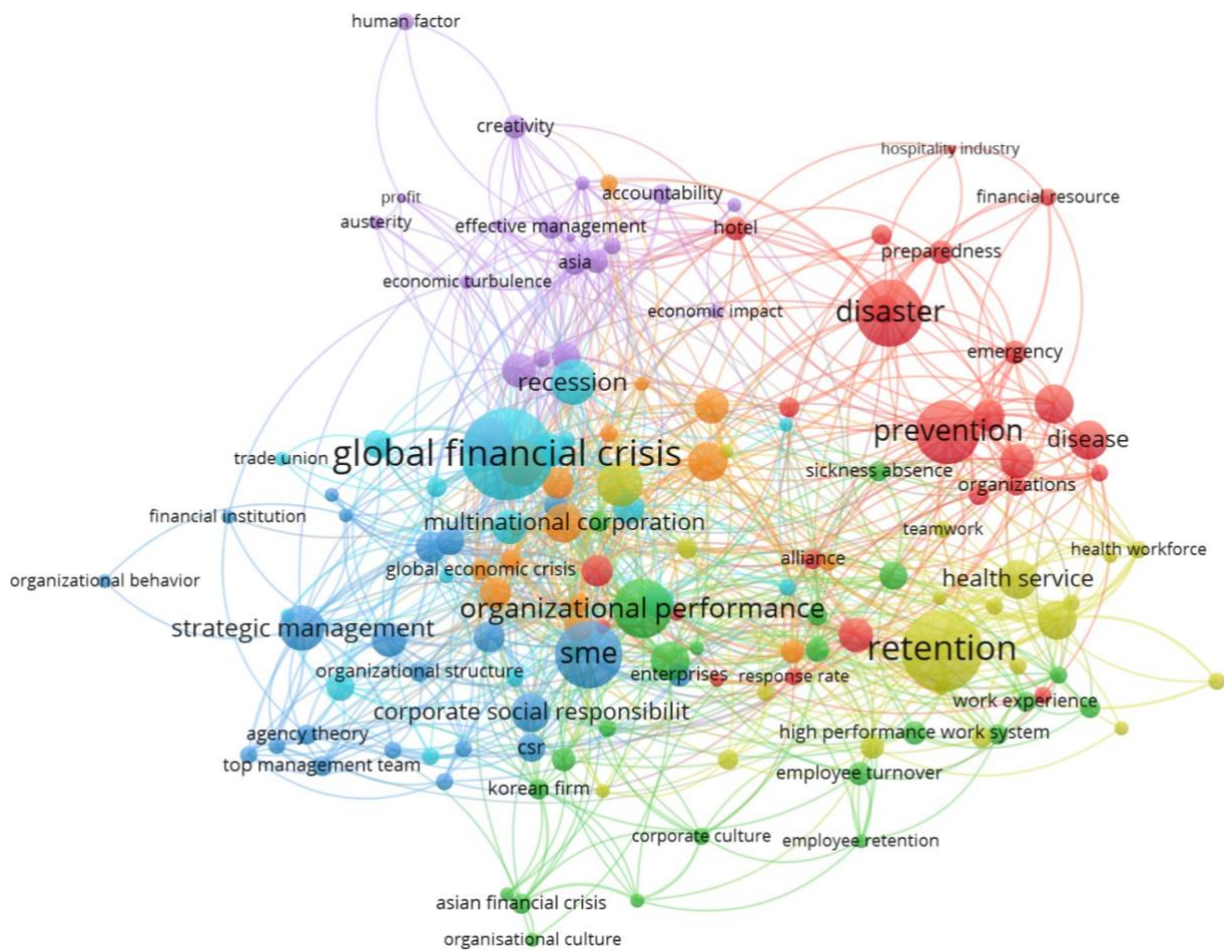

Figure 3 - Map of relations around HRM and CRM keywords

Cluster 1	Cluster 2	Cluster 3
20 items	19 items	21 items
Alliance	Absenteeism	Agency theory
Covid	Business strategy	Business environment
Death	Corporate culture	CEO
Disaster	Corporate performance	Compensation system
Disaster management	Economic recession	Corporate social Responsibility
Disease	Employee engagement	CSR
Emergency	Employee retention	Employee perception
Hospitality industry	Employee turnover	Financial institution
Hotel	High performance work	Firm performance
HR professional	system	Hr executive
Infection	Hr department	Hr manager
Knowledge sharing	Hr strategy	Human resources practice
Organizational	Layoff	Internationalization
commitment	Organizational culture	Organizational behavior
Organizational resilience	Organizational performance	Organizational design
Pandemic	Retention strategy	Organizational structure
Preparation	Sickness absence	SME
Prevention	Turnover intention	Strategic management
Quality management	Work engagement	Survival
Safety management	Work experience	Top management
Uncertain environment		Top management team

Cluster 4	Cluster 5	Cluster 6
19 items	19 items	17 items
Corporate entrepreneurship	Accountability	Ambiguity
Decentralization	Asia	Emergence
Discrimination	Austerity	Employee satisfaction
Employer perspective	Bankruptcy	Employment relationship
Health service	Creativity	European country
Health workforce	Economic downturn	European union
Health workforce crisis	Economic impact	Global financial crisis
Healthcare sector	Economic turbulence	Hr function
Human resource development	Effective management	Job design
Human resource management function	Entrepreneurial orientation	Knowledge transfer
Human resources management practice	Hong Kong	Multinational company
Innovativeness	Hrm system	Recession
Job performance	Human capital	Senior management
Job security	Human factor	Strategic choice
Knowledge management	Managerial control	Strategic human resources management
Proactiveness	New public management	Synergy
Retention	Profit	Trade union
Teamwork	Singapore Unemployment	
Trade		

Table 6 - Most relevant clusters on HRM and CRM

To finalize this section, we proceeded with an analysis of the clusters together with the content of Table 5. Thus, cluster 1 is mostly related with the management of health crisis and the impact of the Covid-19 on organizations (key words such as "Covid", "Infection" and "Pandemic"), namely on the Hospitality Industry. It also refers a few HR practices that can be used to help facing these situations in order to ensure the safety of the employees (key words such as "Knowledge sharing", "Prevention" and "Safety management"). Accordingly, He et al. (2020) focused their study on hospitality and tourism industries, considering the negative effects that Covid-19 had on hotels, restaurants and travel agencies. They used a quantitative approach using a multiple linear regression analysis based on a survey done to employees in hospitality and tourism firms in China. The authors recognize the limitation that their study cannot be generalizable to other economic sectors and suggest, in the future, testing the conceptual model in various industries. Likewise, Lai and Wong (2020) compared crisis management practices in the hotel industry between initial and pandemic stages of Covid-19 and found that, in the initial stage, priority strategies should be applied in all crisis prevention, pricing, human resource and maintenance practices, while in the pandemic stage, besides cutting the number of office hours or working days, reducing the labor force by imposing unpaid vacations becomes a priority measure for hotel managers. Contrary to other studies regarding crisis management practices that were focused on the reactive actions, this paper changes the view of managers to a proactive perspective, as the respondents in the initial stage gave the highest priority to body temperature checks for customers while in the pandemic stage, they prioritized educating employees about the knowledge of epidemic prevention and walked towards a less passive state. Also, Kamoche (2003) studied the HR response to the 1997 Asian Crisis in Hong Kong in the hotel industry and found that, although it was expected that the turbulent context in Hong Kong at the time would incentive managers to adopt a managerial style relying less on established operational structures and more on a balance between structure and flexibility, there were several obstacles resulting from rooted cultural practices and leadership approaches that support the concept of "structure" more than they allow the emergence of "flexibility".

Cluster 2 comprises a set of organizational practices (key words such as "Corporate culture" and "Employee engagement", "Employee retention", "Work engagement") that contribute to the improvement of the organization's performance (key words such as "Business strategy", "Organizational performance", and "Retention strategy"). Consequently, Lai et al. (2016) studied the differences between the responses of small and large firms to times of recession. They examined the effect of the on-going financial crisis at the time in the organizations' operational activities using British large scale survey data and also explored if having HR practices has an impact in the organizations' response to recession. Their findings indicate that SMEs are more exposed during times of recession than larger firms, however the ones with HR practices shown more resilience when facing the crisis. Also, they suggest that the presence of HR practices increases the likelihood of the firm to adopt organizational measures, which helps to manage a crisis situation. Furthermore, Katou A. A. (2017) studied how the human resource management influences organizational performance through an integrative approach-based analysis and aimed to assess the impact of human resource management systems on short-term organizational outcomes, such as motivation, job satisfaction and organizational commitment, and on long-term organizational outcomes, such as employee engagement, organizational citizen behavior, employee cooperation, employee turnover and operational performance. The findings suggest that when comparing the notions of HRM content and HRM process, the first is more positively related to job satisfaction and motivation and less related to organizational commitment than the second. Furthermore, HRM systems are sequentially related to organizational outcomes and considerably impact job satisfaction and motivation, as well as employee cooperation and operational performance.

Cluster 3 emphasizes the role of the HRM on organizations (key words such as "HR manager" and "Human resources practice"), pointing out their relationship with Corporate Social Responsibility (key words "Corporate social Responsibility" and "CSR"), which has become more important for top managers (key words such as "HR executive", "Top management" and "Top management team"), in order to achieve a higher of performance

in companies (key words such as "Firm performance", "Organizational behavior" and "Strategic management"). Accordingly, Sanders et al. (2020) focused their research in analyzing and integrating empirical and conceptual studies on the behavioral perspective of corporate social responsibility (CSR), and explaining its usefulness and need particularly during of the Covid-19. The authors believe that the institutional and firm perspective of CSR, that is, with a focus on why and when companies choose to engage in CSR considering the company's mission and values, as well as laws, industry standards and stakeholder pressure, needs to be complement in a more behavioral approach. This is justified with the fact that a behavioral perspective of CSR simplifies, through an employee-centered conceptual framework, a deeper understanding of when and why employee reactions lead to positive and unintended negative outcomes, especially during the Covid-19 pandemic. This is a particular relevant issue as the authors found that CSR policies in response to Covid-19 are implemented by individual employees, despite being created by the organization, as the way employees perceive and react to CSR actions determine CSR's implementation and success. Also, considering that CSR can be embedded within or peripheral to a company's core functioning, the findings suggest that embedded CSR, with a correct implementation alongside with the employees, is connected to many positive outcomes, whereas peripheral CSR is related to "the dark side" of CSR and can result in negative employee outcomes. Moreover, Sheaffer and Mano-Negrin (2003) aimed to assess the extent to which companies are crisis prone or prepared and examined the effects of executives' orientations on crisis management awareness and practices, suggesting that focusing on a single-sided management is an antecedent of crisis proneness. This study was based in a sample of Israeli business and not-for-profit organizations and concluded that HRM, strategy, structure and unlearning factors (the four critical corporate dimensions) significantly predicted crisis preparedness.

Cluster 4 refers the importance of the healthcare services (key words such as "Health service", "Health workforce", "Health workforce crisis" and "Healthcare sector") and their respective HRM services (key words such as "Human resource management function" and

"Human resources management practice"). It also mentions the importance of the involvement of employees in decision making in order to have a better performance and continually update and innovate the work practices to better face crisis situations (key words such as "Employer perspective", "Innovativeness", "Job performance", "Knowledge management", "Proactiveness" and "Teamwork"). According to the paper of Ordiz-Fuertes and Fernández-Sánchez (2003), organizations should have a focus on HR as a main generator of competitive advantages and emphasize the practices that increase employee motivation when they are inserted in environments where competitiveness largely depends on dynamic advantages. The results of this paper confirm that when companies are experiencing dynamic or turbulent business circumstances, they are more likely to adopt high-involvement work practices. Furthermore, He et al. (2020) studied the effect of socially responsible human resource management (SRHRM) on employee fears of the threats of Covid-19 and found that SRHRM negatively influenced employee fears of external threats, once they trusted more in their organizations. Additionally, the strength of the Covid-19 pandemic positively moderated the effect of SRHRM on employee fears as the negative impact of SRHRM on employee fears of external threats was more intense when the pandemic was in a peak.

Cluster 5 is related to the impacts of a crisis in the economy (key words such as "Austerity", "Bankruptcy", "Economic downturn", "Economic impact" and "Economic turbulence"), positioning the HRM as a key factor to minimize these impacts (key words such as "HRM system", "Human capital" and "Human factor"). It also relates these issues in the Asiatic context ("Asia", "Hong Kong" and "Singapore"). Authors such as Sitalaksmi and Zhu (2010) studied the process of transformation of HRM in Indonesian state-owned enterprises since the 1997 Asian Crisis, as Indonesia was one of the Asian countries that experienced rapid institutional change since that crisis, which forced companies to go through a transformation to endure in the increasing competitive market. This study found that the transformation of state-owned enterprises was determined by the corporations' relationships with both their internal and external stakeholders. Following the Asian Crisis,

Indonesia witnesses a drastic change of the HR practices toward greater market orientation and the pervasiveness of 'best practice'. Furthermore, Jun and Rowley (2014) found that emphasizing HRM practices after the financial crisis positively impacted corporate performance on General Trading Companies in South Korea. Additionally, Zhu et al. (2007) aimed to identifying what elements existed in East Asian people-management system, which were adopted into their systems and what factors determined such changes. These authors demonstrated that HRM was in a reforming process in East Asia towards a hybrid people-management system, which combined several aspects from US and European people-management systems.

Finally, Cluster 6 is more focused on Europe (key words such as "European country" and "European Union") and in on broad context (key words such as "Global financial crisis", "Multinational company" and "Trade union"). It also highlights how the HRM can help dealing with these situations in a more collaborative way (key words such as "Strategic choice", "Strategic human resources Management", "Knowledge transfer" and "Synergy"). Accordingly, Gunnigle and Monaghan (2013) focused their paper in examining the impact of the global financial crisis on human resource management in multinational companies in Ireland and focused on four key areas of HR, specifically staffing, pay and benefits, industrial relations and the HR function. This paper presents evidence showing that multinational companies have been in the vanguard of organizations engaging in multidimensional restructuring programs in response to the global financial crisis, incorporating several practices in the domain of HRM, including job cuts, short-term working, pay cuts and freezes, reduced benefits and changes in industrial relations. The HR function had a central role in responding to the global financial crisis within multinational companies, and there was evidence of a reorganization of, and financial pressure on, the HR function itself. Katou A. A. (2017) focused her research in analyzing the influence of human resource management on organizational performance in Greece during a severe financial crisis and gave the suggestion for future research to consider analyzing other countries such as Portugal, Cyprus, Ireland and Spain, which were experiencing similar financial crises, once

her results came from a unique context and therefore may not generalize across other contexts. Additionally, Ordiz-Fuertes and Fernández-Sánchez (2003) used data from 250 Spanish firms to assess the frequency of high-involvement practices and explore which variables were linked to adopting such practices. Specifically, the authors analyzed the influence of size, age, competitive advantage, activity sector, the existence of a recent crisis, culture, leadership style and the competitiveness of the environment on the adoption of high-involvement work practices in these Spanish companies.

5. Discussion, contributions and limitations

5.1 Discussion

The study of the references that arise in HRM and CRM articles has a vital role to explore and understand the origin of the scientific information acknowledged and used by the investigators in these areas. Despite the low amount of literature found about HRM and CRM, the systematic review presented in this paper helps identifying empirical research and opens doors for future investigation. We can conclude that CRM is a topic of growing importance for companies that want to endure and survive to unexpected changes in the business environment, thus maintaining a proper control of organizational risks and maximizing value creation for the stakeholders. The integration of HRM in crisis management appears to be crucial to maintain an organization sustainable and competitive. This investigation stressed a few of the most prominent topics related with CRM that arose from intersecting HRM and CRM, and the corresponding content analysis of the most relevant literature regarding the considered topics. To do so, a broad and systematic overview of the more influent articles publicized was done. This analyses also comprised the scientific journals, authors and countries with more publications in these fields of study, between 1990 and 2020, considering the contents of the WoS database. These results can help identify the main trends in specific research fields and show that this is an area with opportunities for developing more studies and investigations. Even though

a larger number of studies focus on the state and evolution of HRM and CRM separately, no bibliometric studies were found to access and quantify the intellectual framework of research in an integrated approach nor to perform such quantification considering the information covered in the abstracts of published articles. The present paper represents the intellectual structures, scientific publications and trends in HRM and CRM research, and evaluates these over the years by applying bibliometric tools. Using bibliometric analysis to identify relations between keywords creates maps of clusters with high density areas representing high concentration of citations, thus demonstrating the relevance of research fields relating to HRM and CRM.

The results clearly show that the implementation of HRM practices is intrinsically related to the way in which companies manage crisis and maintain business continuity, and is closely related to: 1) uncertainty management, once the business context surrounding an organization can rapidly shift, companies need contingency plan that anticipate HRM practices capable of facing changing circumstances; 2) the adaptation capabilities of both employees and organizations.

The growing instability of the business context has led companies to search for ways to be better prepared for uncertainty situations. Between natural hazards, economic and financial crisis and, more recently, world pandemics, organizations and their employees are subject to pressures from many different angles. The most recent crisis, the Covid-19, brought more attention to the topic of CRM and the role that HRM can have, as this is a crisis that directly affects the employees' health and life unlike the more common types of crisis, which brought more fear and apprehensiveness to organizations. This outbreak forced many firms to make fast decisions about human resource management, for example, regarding staying at work or working from home (when online work was possible), which operations and tasks could be carried out in a digital platform, what changed in terms of organizational priorities and how to communicate these changes to employees. Some of

the measures advanced by literature as fundamental to properly use the human resources to manage a crisis are:

1) Transformational leadership with an emphasis on Chief Human Resource Officers and creation of a sense of purpose (Caligiuri et al., 2020);

2) Adopt high-involvement work practices when companies are inserted in a dynamic context, that is, involve the employees in the process of decision making, thus leading to a higher degree of acceptance towards changes (Ordiz-Fuertes and Fernández-Sánchez, 2003);

3) Incorporate systemic corporate thinking in the preparedness for crises to better equip companies to deal with organizational downturns (Sheaffer and Mano-Negrin, 2003);

4) Consider that policies implemented to deal with a crisis will only be effective if properly communicated to employees as the way employees perceive and react to these actions determines their implementation and success (Sanders et al., 2020);

5) Carefully manage the shift from presential to online work as, although some employees feel more enjoyment, satisfaction and motivation in working from home, several factors, such as age, culture and income may affect how the employees perceive the new work situation and consequently, their job performance (Susilo, 2020);

6) Recognize the importance of socially- responsible human resource management, as it enhances trust in the organizations and thus has a negative impact on employee fears of external threats (He et al., 2020).

5.2 Contributions

With the use of this recent methodological approach, this study was able to gather a broad overview of the existing literature so far and identify new fields of research of HRM and CRM with the purpose of establishing possible paths for future research. This paper contributes to this area emphasizing the mains articles that contributed significantly to the

integrated analysis of these variables and their intersection points, and categorizing the gaps and suggestions for future research provided in the main literature available, such as:

7) How to manage global uncertainty in the fields of leadership and talent management, collaborating under stress, and managing health and safety;

8) How to facilitate global work in the fields of global teams and virtual collaboration and international assignments and on how to redefine organizational performance

9) How companies can support and evaluate their practices regarding the support of managers before and after a crisis;

10) How differences in age, culture, education, income and industry may affect the job performance of people who are forced to change their work condition due to a crisis;

11) Study the recovery stage to complete the research of the COVID-19 crisis cycle and to access if the changes in strategies used by companies lead to superior outcomes or a higher rate of recovery.

Furthermore, the following managerial suggestions should be emphasized (Caligiuri et al., 2020):

1) Define priorities at the time of a pandemic and how can HRM help fulfilling them;

2) Understand which bundles/configurations of HRM practices have enabled effective organizational adaptation and prioritization, and which ones have caused failed to do so;

3) Recognize how HRM can help companies to build organizational resilience;

4) Delineate how can companies recognize and reward leaders who are able to foster a spirit of shared humanity during a pandemic;

5) Clarify what should be the key performance indicators of the HRM function during a crisis;

This is still a relatively unexplored field with a small body of literature. There is a need for further exploitation of the concepts considered and link the academia and business worlds

to draw accurate conclusions about possibly existing relationships. Empirical investigations that strengthen the contribution of human resource management practices to crisis management inside organizations can be a source to business leaders of evidence-based arguments and methods to support good HRM practices, helping them contributing to value creation, business continuity and resilience. The Covid-19 crisis, as a global shock, reinforces the idea that HRM professionals have an opportunity, or responsibility, to make a difference by providing inspired responses, grounded in state-of-the-art academic work, to face the growing challenges of the future.

5.3   Limitations

Although this paper is not free of limitations, we believe the main purpose was achieved. The first limitation comes from analyzing only journals and disregarding different works such as dissertations, theses and reports can be a limitation. Even though this was a calculated risk, once choosing articles published in journals assures quality control and a source of "certified knowledge" of studies peer-reviewed, further research could consider other sources of information. Accordingly, a second limitation can arise from using only one search engine, WoS. Rejecting other academic research databases when collecting bibliometric data can have impact in the degree to which the data is representative. Future studies could address this possibility. Thirdly, complex concepts such as HRM and CRM can be hard to measure thus, relying in a consistent source of data is a significant and demanding challenge of management sciences. Finally, a bibliometric tool itself has some limitations, such as

the quality of the data gathered, once a high citation count may not necessarily indicate quality of the article. Several articles relating HRM and CRM are now being published on light if the Covid-19 crisis and will, therefore, have a relatively low number of citations. An ideal analysis would use these tools conjointly with other data regarding the quality of a paper. Finally, since companies are still fighting to deal with this pandemic, conducting a similar study after the crisis is over and organizations start returning to their normal stages

can be helpful to understand in which type of HRM measures the companies that survive with less damage adopted and in which direction the literature relating HRM and CRM followed after the experience of Covid-19.

6. References

Alariki, G., & Al-Abed, M. S. (2021). The Impact of Crisis Management on Employee's Performance in the Yemeni Oil and Gas Industry. Journal of Impact, 2(1), 16-27.

Analytics, C. (2017). Web of science. *Trust the Difference. Web of Science Fact Book. Available online: http://images. info. science. thomsonreuters. biz/Web/ThomsonReutersScience/% 7Bd6b7faae-3cc2-4186-8985-a6ecc8cce1ee% 7D_Crv_WoS_Upsell_Factbook_A4_FA_LR_edits. pdf (accessed on 06 May* 2021).

Areiqat, A., & Zamil, A. (2011). The role of empowerment in crisis management in business organizations. Asian Journal of Business Management, 3(3), 188-195.

Becker, K., & Smidt, M. (2016). A risk perspective on human resource management: A review and directions for future research. Human Resource Management Review, 26(2), 149-165.

Boxall, P., & Purcell, J. (2008), "Strategy and Human Resource Management", 2nd edition, New York: Palgrave MacMillan, 351 pp., ISBN 978-1-403992-10-9.

Bundy, J., Pfarrer, M.D., Short, C.E. and Coombs, W.T. (2017), "Crises and crisis management: integration, interpretation, and research development", Journal of Management, Vol. 43 No. 6, pp. 1661-1692.

Caligiuri, P., De Cieri, H., Minbaeva, D., Verbeke, A., & Zimmermann, A. (2020). International HRM insights for navigating the COVID-19 pandemic: Implications for future research and practice. Journal of International Business Studies.doi:10.1057/s41267-020-00335-9.

Cameron, K.S.and Spreitzer, G.M. (2012), "The Oxford Handbook of Positive Organizational Scholarship", Oxford University Press: Oxford, UK.

Carnevale, J. B., & Hatak, I. (2020), "Employee adjustment and well-being in the era of COVID-19: Implications for human resource management", Journal of Business Research, 116, 183-187.

Clair, R., Gordon, M., Kroon, M., & Reilly, C. (2021). The effects of social isolation on well-being and life satisfaction during pandemic. Humanities and Social Sciences Communications, 8(1), 1-6.

Cooke, F. L., Dickmann, M., & Parry, E. (2020). IJHRM after 30 years: taking stock in times of COVID-19 and looking towards the future of HR research. The International Journal of Human Resource Management, 1-23.

Cunningham, C. E., Woodward, C. A., Shannon, H. S., MacIntosh, J., Lendrum, B., Rosenbloom, D., & Brown, J. (2002). Readiness for organizational change: A longitudinal study of workplace, psychological and behavioral correlates. Journal of Occupational and Organizational psychology, 75(4), 377-392.

Dayton, B. W. (2004), "Managing Crises in the Twenty First Century", International Studies Review, 165-194.

Du, H. and Ke, X. (2017) 'A bibliometric analysis of emergency management using information systems (2000–2016)', Online Information Review, Vol. 41, No. 4, pp.1468–4527, DOI: 10.1108/OIR-05-2017-0142.

Fearn-Banks, K. (1996). Crisis Communication: A Casebook Approach (3th edition), Lawrence Erlbaum Associates Publishers, Mahwah, NJ

Fontoura, P.T.G. and Coelho, A.F.M. (2020) "Social responsibility in supply chain: bibliometric analysis and literature review", Global Business and Economics Review, Vol. 23, No. 3, pp.302–346.

Gannon, J., & Paraskevas, A. (2019). In the line of fire: Managing expatriates in hostile environments. The International Journal of Human Resource Management, 30(11), 1737-1768.

Gould-Williams, Julian (2003), "The importance of HR practices and workplace trust in achieving superior performance: A study of public-sector organizations",

International Journal of Human Resource Management, 14:1, 28-54, doi: 10.1080/09585190210158501

Gunnigle, P., Lavelle, J., & Monaghan, S. (2013). Weathering the storm? Multinational companies and human resource management through the global financial crisis. International Journal of Manpower.

Han, J.H., Kang, S., Oh, I.-S., Kehoe, R.R. & Lepak, D.P. (2019), "The goldilocks effect of strategic human resource management? Optimizing the benefits of a high-performance work system through the dual alignment of vertical and horizontal fit", Academy of Management Journal, 62(5), 1388-1412

Harvey, S. and Haines, V.Y. ii (2005), "Employer treatment of employees during a community crisis: the role of procedural and distributive justice", Journal of Business and Psychology, Vol. 20 No. 1, pp. 53-68.

He, J., Mao, Y., Morrison, A. M., & Coca-Stefaniak, J. A. (2020), "On being warm and friendly: the effect of socially responsible human resource management on employee fears of the threats of COVID-19". International Journal of Contemporary Hospitality Management.

Herbane, B. (2010). The evolution of business continuity management: A historical review of practices and drivers. Business history, 52(6), 978-1002.

Hollingsworth TD, Klinkenberg D, Heesterbeek H, Anderson RM. (2011) "Mitigation strategies for pandemic influenza A: balancing conflicting policy objectives". PLoS Comput Biol.

Huselid, M.A. (1995) 'The impact of human resource management: an agenda for the 1990s'. International Journal of Human Resource Management, 1(1): 17– 43.

Jiang, K., Lepak, D. P., Han, K., Hong, Y., Kim, A., and Winkler, A. L. (2012), "Clarifying the construct of human resource systems: Relating human resource management to employee performance.", Human Resource Management Review, 22: 73-85.

Jun, W., & Rowley, C. (2014). Change and continuity in management systems and corporate performance: Human resource management, corporate culture, risk management and corporate strategy in South Korea. Business History, 56(3), 485-508

Kamoche, K. (2003). Riding the typhoon: the HR response to the economic crisis in Hong Kong. International Journal of Human Resource Management, 14(2), 199-221.

Katou, A. A. (2013). The link between HR practices, psychological contract fulfilment, and organisational performance in Greece: An economic crisis perspective. Journal of Industrial Engineering and Management (JIEM), 6(2), 568-594.

Katou, A. A. (2017). How does human resource management influence organisational performance? An integrative approach-based analysis. International Journal of Productivity and Performance Management.

Kulkarni, A. V., Aziz, B., Shams, I., & Busse, J. W. (2009). Comparisons of citations in Web of Science, Scopus, and Google Scholar for articles published in general medical journals. Jama, 302(10), 1092-1096.

Lai, I. K. W., & Wong, J. W. C. (2020), "Comparing crisis management practices in the hotel industry between initial and pandemic stages of COVID-19", International Journal of Contemporary Hospitality Management.

Lai, Y., Saridakis, G., Blackburn, R., & Johnstone, S. (2016). Are the HR responses of small firms different from large firms in times of recession?. Journal of Business Venturing, 31(1), 113-131.

Lepak, D. P., Liao, H., Chung, Y., & Harden, E. E. (2006), "A conceptual review of human resource management systems in strategic human resource management research", In J. J. Martocchio (Ed.), Research in personnel and human resource management (pp. 217–271). Greenwich, CT: JAI Press.

Maheshwari, S., & Vohra, V. (2015). Identifying critical HR practices impacting employee perception and commitment during organizational change. Journal of Organizational Change Management.

Manuti, A., Giancaspro, M. L., Molino, M., Ingusci, E., Russo, V., Signore, F., Zito., M, Cortese, C. G. (2020). "Everything will be fine": A study on the relationship between employees' perception of sustainable HRM practices and positive organizational behavior during COVID19. Sustainability (Switzerland), 12(23), 1-17. doi:10.3390/su122310216

Marchington, M. and Grugulis, I. (2000) ''Best Practice'' Human Resource Management: Perfect Opportunity or Dangerous Illusion?', International Journal of Human Resource Management, 11(6): 1104–24.

Marchington, M., & Kynighou, A. (2012). The dynamics of employee involvement and participation during turbulent times. The International Journal of Human Resource Management, 23(16), 3336-3354.

Nizamidou, C., & Vouzas, F. (2018). MHR. Providing a new perspective in HR in terms of crisis management. International Journal of Business Science and Applied Management, 13(1), 15-25.

Ordiz-Fuertes, M., & Fernández-Sánchez, E. (2003). High-involvement practices in human resource management: concept and factors that motivate their adoption. International Journal of Human Resource Management, 14(4), 511-529.

Park, J., T.P. Seager, P.S.C. Rao, M. Convertino, and I. Linkov. (2013), "Integrating risk and resilience approaches to catastrophe management in engineering systems", Risk Analysis 33(3): 356–367.

Patterson, M., West, M., Lawthom, R. and Nickell, S. (1997), "The Impact of People Management Practices on Business Performance", London: Institute of Personnel and Development.

Sanders, K., Nguyen, P. T., Bouckenooghe, D., Rafferty, A., & Schwarz, G. (2020). Unraveling the what and how of organizational communication to employees during COVID-19 pandemic: Adopting an attributional lens. The Journal of Applied Behavioral Science, 56(3), 289-293.

Schuler, R. S., & Jackson, S. E. (1987). Linking competitive strategy with human resource management practices. The Academy of Management Executive, 3, 207–219.

Sheaffer, Z., & Mano-Negrin, R. (2003). Executives' orientations as indicators of crisis management policies and practices. Journal of Management Studies, 40(2), 573-606.

Sitalaksmi, S., & Zhu, Y. (2010). The transformation of human resource management in Indonesian state-owned enterprises since the Asian Crisis. Asia Pacific Business Review, 16(1-2), 37-57.

Susilo, D. (2020). "Revealing the Effect of Work-From-Home on Job Performance during the Covid-19 Crisis: Empirical Evidence from Indonesia". Journal of Contemporary Issues in Business and Government, 26(1), 23-40.

Taneja, S., Pryor, M. G., Sewell, S., Recuero, A.M. (2014), "Strategic Crisis Management: A Basis for Renewal and Crisis Prevention", Journal of Management Policy and Practice vol. 15(1) 2014

Taneja, S., Pryor, M. G., Sewell, S., Recuero, A.M. (2014). Strategic Crisis Management: A Basis for Renewal and Crisis Prevention. Journal of Management Policy and Practice, vol. 15(1) 2014

Vardarlıer, P. (2016). Strategic approach to human resources management during crisis. Procedia-Social and Behavioral Sciences, 235, 463-472.

WHO (2020), "Novel coronavirus (2019-nCoV) SITUATION REPORT – 71", Novel Coronavirus: World Health Organisation, World Health Organization, Geneva.

Wright, P. M., Gardner, T. M., & Moynihan, L. M. (2003), "The impact of HR practices on the performance of business units.", Human resource management journal, 13(3), 21-36.

Wright, P. M., Gardner, T. M., Moynihan, L. M., & Allen, M. R. (2005), "The relationship between HR practices and firm performance: Examining causal order.", Personnel psychology, 58(2), 409-446.

Zagelmeyer, S., & Gollan, P. J. (2012). Exploring terra incognita: preliminary reflections on the impact of the global financial crisis upon human resource management. The International Journal of Human Resource Management, 23(16), 3287-3294.

Zhu, Y., Warner, M., & Rowley, C. (2007). Human resource management with 'Asian' characteristics: a hybrid people-management system in East Asia. The international journal of human resource management, 18(5), 745-768.